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PROCEEDINGS OF PUBLIC MEETING OF THE PRESIDENT'S AIR QUALITY ADVISORY BOARD ON URBAN AIR POLLUTION PROBLEMS HELD AT ST. LOUIS, MISSOURI ON MARCH 29, 1973

President's Air Quality Advisory Board,
Washington, D. C.

29 March 1976

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PUBLIC MEETING

of the

PRESIDENT'S AIR QUALITY ADVISORY BOARD

on

URBAN AIR POLLUTION PROBLEMS

held in
St. Louis, Missouri
on
March 29, 1973

TRANSCRIPT OF PROCEEDINGS

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A public meeting of the President's Air Quality Advisory Board convened at 9 o'clock on March 29, 1973, in the North Ballroom of Stouffer's Riverfront Inn in St. Louis, Missouri, to discuss Urban Air Pollution Problems.

PRESIDING:

Mr. A. J. Barnes
Assistant to the Administrator
Environmental Protection Agency
Washington, D.C.

BOARD MEMBERS PRESENT:

Dr. Arnold O. Beckman
Chairman of the Board
Beckman Instruments, Inc.
Fullerton, California

Mr. W. Donham Crawford
President, Edison Electric
Edison Electric Institute
New York, N. Y.

Dr. Coleman D. Donaldson
President & Senior Consultant
Aeronautical Research Association
of Princeton, Inc.
Princeton, New Jersey

Mr. William D. Evers
Attorney at Law
Miller, Groezinger, Pettit & Evers
San Francisco, California

Professor Matthew Holden, Jr.
Professor of Political Science
University of Wisconsin
Madison, Wisconsin

BOARD MEMBERS PRESENT (continued):

Mr. Thomas L. Kimball
Executive Vice President
National Wildlife Federation
Washington, D. C.

Mr. Joseph Kovago
Senior Mechanical Engineer
Atlantic City Electric Company
Atlantic City, New Jersey

Dr. E. Alan Lohse
Senior Scientist & Program Coordinator
Gulf Universities & Research Consortium
Houston, Texas

Mr. A. Mitchell McConnell, Jr.
Attorney at Law
Barnett, Greenebaum, Martin & McConnell
Louisville, Kentucky

Mr. Joseph K. Prince
Chief Technical Advisor and Special
Pollution Investigator
Attorney General's Office
State of Illinois
Chicago, Illinois

Mr. G. Don Sullivan
Consultant on Environmental Matters
American Mining Congress
Washington, D. C.

ALSO PRESENT:

Mr. ~~Gerald~~ Jerome Svore
Regional Administrator, Region VII
Environmental Protection Agency
Kansas City, Missouri

- - -

OPENING STATEMENT

BY

MR. A. JAMES BARNES

MR. BARNES: At this point the public meeting of the President's Air Quality Advisory Board will please come to order.

Just by way of introduction, my name is Jim Barnes. I am assistant to Bill Ruckelshaus, who is the Administrator of the Environmental Protection Agency and who is the statutorily designated Chairman of this Board, but when he is unable to make it designates someone, in this case myself, to preside over the Board.

Just by way of a brief introduction for those of the members of the public that are here as to the nature and background of the Board, the Board was created by act of Congress. It is composed of 15 members appointed by the President of the United States for 3-year terms to advise the President and the Administrator of EPA regarding the air pollution control programs of the Federal Government.

Our purpose in being in St. Louis this week is to have the Board take a detailed look at the Federal air pollution control program, ranging all the way from some of the health effects research that is going on through the implementation plan process and looking specifically at how this process impacts on a given metropolitan area, in this case the St. Louis area. The reason for picking St. Louis was that in many cases it is an average city. Its problems are not as harsh as perhaps they are in Los Angeles, and yet it has most of the major air pollution problems that are commonly found in a major city.

Another reason for choosing it is that the Environmental Protection Agency now has a number of rather intensive study programs going on in the St. Louis area. It is an area that we will probably have a larger data base on than we do many other cities and the city, I think, has been honored by the fact that it is involved in the United States-Russian environmental agreement and also has been the subject of some international studies that have been done through NATO.

As far as the Board's background a little bit, the Board has been meeting now since Tuesday morning. On Tuesday they had a series of briefings by various EPA officials from Durham, from Washington, and from here on health effects, economic cost benefit studies, the whole range of the air pollution control program and problems. Yesterday we took a tour of the St. Louis area, including the Union Electric plant, where there is a project that is co-sponsored by EPA, the city of St. Louis and Union Electric whereby refuse from the city of St. Louis is being used as a fuel to produce electricity, and we also looked at some of the major pollution sources in the St. Louis area as well as some of the air monitoring stations here.

Today this is the third piece of the Board's inquiry. It is what we call a public hearing, but the major purpose is to bring a number of witnesses from the State and local area before the Board, give them a chance to make a statement and then answer some questions from the Board so that the Board can develop a better knowledge base for making their recommendations to the Administrator and they will be meeting tomorrow to work on that.

Just quickly, now, to introduce the members of the Board that we have here with us, give you just a little bit of their background, to my right is Dr. Arnold--I should say one person over to my right is Dr. Arnold Beckman, who is the Chairman of the Board of Directors of Beckman Instruments, and who the Board was, I think, impressed by yesterday when we went to a number of air monitoring stations and found that about half the measuring equipment in those stations had been made by Beckman Instruments. So Dr. Beckman is a real leader in the field of instrumentation.

To his right is Mr. W. Donham Crawford, who is the President of the Edison Electric Institute in New York City.

To his right Dr. Coleman D. Donaldson, who is President and Senior Consultant of the Aeronautical Research Association at Princeton.

And to his right is Mitchell McConnell, who is an attorney from Louisville, Kentucky.

And to his right is G. Don Sullivan, who is an Environmental Consultant to the American Mining Congress.

And now to my left is Dr. Alan Lohse, who is the Senior Scientist for Geology and Geophysics for the Gulf Universities Research Consortium.

To his left is Mr. Thomas Kimball, who is the Executive Vice President of the National Wildlife Federation, which is the world's largest private conservation organization with more than 2-1/2--I think he said yesterday 3-1/2 million members. We can see that we have gone up some since the biography had been written.

To his left is Mr. Joseph Kovago, who is the Senior Research Engineer of the Atlantic City Electric Company, and who has, I think, a very unique background in that he is a native of Hungary, where he had been a member of Parliament and also had been Mayor of the city of Budapest.

To his left is Mr. Joseph Prince, who is with the State of Illinois control program in that he is the Chief Technical Adviser and Special Pollution Investigator for the Environmental Control Division of the Attorney General's Office.

And to his left is Mr. William Evers, who is an attorney from San Francisco, California.

And to his left is the Regional Administrator of the Environmental Protection Agency for Region VII, Mr. Jerry Svore.

And at this point I would like to introduce our honored speaker and greeter this morning, the Honorable Governor of the State of Missouri, Governor Christopher Bond. And I just might add that the Administrator has asked me to extend his warm greetings to you, Governor, to indicate that he has been hearing a number of things back in Washington concerning your enthusiasm and interest in the environmental area that has made him very pleased to hear and I think he wishes you well with your attempt to bring all the pollution control activities in the State of Missouri under a single umbrella agency similar to EPA.

HONORABLE CHRISTOPHER BOND
GOVERNOR
STATE OF MISSOURI

GOVERNOR BOND: Thank you very much, Mr. Barnes. And ladies and gentlemen.

By way of apologizing for my somewhat delayed arrival today, we had an ecological problem in Jefferson City. The airport is in the floodplain and the Missouri River was flooding. As a result, we had to go to Columbia so we could leave the air field. They moved all the planes out of Jefferson City and we are wondering whether we are going to get back tonight. But it is certainly a pleasant day in St. Louis and we are happy to be here.

I would like to offer a warmest welcome on behalf of the State of Missouri to the members of the Air Quality Advisory Board and the other distinguished guests who are here today. Normally when I meet with a representative of EPA -- I think the last time Mr. Ruckelshaus was in town we got up for an early morning tour of the sewage disposal facilities. You normally don't meet with the EPA on an empty stomach, but we appreciate the great cooperation that we have had from everyone in the EPA from Mr. Ruckelshaus to the Regional Directors and staff and to those of you who are participating in this project.

Hon. C. Bond

I understand that in New York City there is a popular saying that they like to be able to see the air they breathe. Well, I don't exactly subscribe to that here in Missouri. I do admit that there are days in St. Louis when you can't find the arch and, in fact, about two months ago the St. Louis area was under an air pollution advisory which suggested that residents with respiratory problems should not go outside.

Speaking not only as Governor of Missouri, but also as a citizen of Missouri who is concerned about the quality of the air we breaths, I can appreciate the contributions you have made in the field of clean air. I also sincerely hope that you will continue not only to focus attention on the problems of air pollution but on the solutions to those problems.

As you are probably only too well aware, ecology is very different from most of the other vital issues affecting our lives today. Unlike so many issues which have people for and people against them, everyone seems to be against pollution. The trouble is, people disagree on what should be done about pollution, how fast it should be done and who should pay the cost.

As officials involved in formulating the Nation's environmental priorities and policies, you must feel that you are caught in the middle sometimes between two opposing groups. On the one hand you have the citizen environmental groups who complain you aren't moving fast enough and on the other you have industries which complain you are moving too fast.

Now, the control of air pollution is made more difficult because the problem knows no political boundaries. We have read recently that acid rains in Sweden reportedly resulted from coal burning on the British Isles or that pollution in Chicago can be traced to industrial activity in Oklahoma. Certainly we realize that the environmental crisis is a crisis and that it will take a unified governmental policy to overcome it and it will take coordination and cooperation among all levels of government.

In Missouri we feel that we have good cooperation between the State and local governments and we feel that progress against air pollution is being made. We are presently enforcing regulations to control automobile emissions, restrict open burning, control the use of incinerators, restrict the emission of sulfur compounds, visible air contaminants and particulate matter and control odor emissions. Last year the Missouri Legislature gave our State's Air Conservation Commission the added power to prevent any new or modified air contaminant source from being built unless plans and specifications are presented to show that the source will not be a polluter. Work is presently progressing on regulations to control lead emissions from lead smelters and nitrogen dioxide from nitric acid plants.

But many problem areas do exist and there is still much work that must be done. Our major metropolitan areas, for example, are still not clean and certainly present the greatest challenges. Recognizing that fact, the State has delegated air pollution control authority in these areas to local agencies in much the same way as the Federal Government has delegated authority to the State agencies. To be certified by the State, local agencies must adopt the same control standards.

At the present time we have local agencies in St. Louis City, St. Louis County, Kansas City, Independence and Springfield. Cooperation between State and local officials has been very good and I believe that without it our total effort against air pollution would be seriously reduced.

We also could not be as effective without the assistance of the Federal Environmental Protection Agency, both technical and financial, although the coordination has not always been as good as between the State and local agencies.

As you know, EPA is presently engaging in a $20 million to $30 million 5-year study of air pollution in the St. Louis metropolitan area. It seems that due to certain geographical and other factors St. Louis has the dubious distinction of being one of the best places to study air pollution in the Nation. It has a wide diversity of pollutants present and is relatively isolated from other large metropolitan areas.

The originators of the study hope the results obtained will aid in the development of better control strategies for St. Louis and for other cities with similar problems throughout the Nation and even the world.

It is significant that St. Louis has been chosen for this meeting for air pollution is largely an urban problem. We must recognize that the problem of air pollution in the urban center is virtually inseparable from the large scope of social problems, health and welfare, commerce, unemployment, mass transportation, the economy, energy generation, recreation, solid waste management.

Our administration recognizes that the problem of transportation for large numbers of metropolitan residents has a pervasive impact on the quality of air and our entire life style. We have taken a very active interest in providing the essential tools to deal with our mass transit needs. Towards this objective we have proposed major reforms, including the establishment of a State mass transportation assistance fund to aid our cities in planning and financing of viable mass transit programs. It is clear that any long-range solution to the problem of air pollution must also include a healthy mass transportation system. Without it the increase in the number of cars on the road may well overcome the benefits of having emission controls.

As a Missourian I welcome the fact that you have gathered today in St. Louis. I hope that through activities such as yours we can develop more and better ways of working together in the field of ecology. The urgency of the problem is readily apparent on increasing occasions in our cities. To be effective, our approach must be both comprehensive and coordinated. As you continue your task and your work today, I want you to know that we in Missouri are looking to you for new solutions, for leadership, for effective action.

Thank you very much. (Applause.)

MR. BARNES: Thank you very much, Governor Bond, for what I think was a very excellent keynote statement for our session this morning. I think you have laid out very well a number of the objectives and pieces that we are going to be looking at over today.

Admiral R. R. Waesche

Is there a representative of the Mayor's office here? (No response.)

Well, at this point in the program we had been scheduled to hear from the Mayor of the city of St. Louis, and since I don't believe he has arrived yet this morning we will move on to the next spot in our program and we will catch the Mayor, then, when he does arrive.

Our next speaker, representing the Department of Transportation, and speaking on the topic of the future of air quality as it relates to intermodal transportation, will be Rear Admiral Russell R. Waesche, who is the Secretarial Representative of the Department of Transportation for Region VII, which includes the city of St. Louis.

So Admiral Waesche.

MR. SVORE: He just stepped out. I know he is here.

MR. BARNES: O. K.

MR. SVORE: I will get him.

(Off the record.)

MR. BARNES: My apologies, Rear Admiral. We skipped a speaker.

ADMIRAL WAESCHE: KMOX bulkhead had me out there to make a little talk on the radio and I didn't know I was going to go on early, but I am happy to.

MR. BARNES: All right. I am sorry, sir, we have introduced you.

Again at this point we will hear from the Secretarial Representative of the Department of Transportation, Rear Admiral Russell Waesche.

REAR ADMIRAL RUSSELL R. WAESCHE
SECRETARIAL REPRESENTATIVE
DEPARTMENT OF TRANSPORTATION
REGION VII

ADMIRAL WAESCHE: Last summer I went on a picnic with a very beautiful young lady out in the country. In fact, I must admit to you that the young lady was not only much younger than I but younger than half my age. I had with me some cartons of sandwiches and the cartons were made of foam plastic.

As we sat there eating I leaned over toward the young lady and I said, "You know, you are a beautiful blue-eyed baby blond doll."

And she said, "Daddy, stop this stuff. You know that those foam plastic cartons are not biodegradeable and if you burn them they don't burn, they melt and they give off fumes which are pollutants in the air."

And I said, "How do you know all that?"

And she said, "We learned it in school."

And it came to me then that if our schools are teaching that, it is one of the finest things that can be taught today.

And she said to me, "What kind of air pollution do we get from burning foam plastic?"

And I said, "I don't know."

And she said, "Well, when I take chemistry in high school, I'm going to find out and then I'll tell you."

Some of you are young enough to remember steam locomotives pulling passenger trains. When we sat in the day coaches and the cinders came in the windows, pretty soon there was an eighth of an inch deep soot on the window sills. And some of you may remember that all ships were coal burning ships and it was impossible to sail a ship of that nature without vast quantities of black smoke coming from the funnels.

I was in London before World War II in the fall and I was amazed to see that from every home there was one chimney that was spewing forth vast quantities of smoke, in every home. In those days and even now many of the Londoners are so poor that when they heat their homes they heat only one room. There is no central heating. And they have great big heavy draperies across the doors of all the rooms and they heat just one room and they live in that room until they go to bed and they go to bed in a cold room.

But these vast quantities of smoke were increasing the severity of their London fogs so that there were maybe 10 or 15 extremely dense fogs every year. And when I went back to London in 1958 to be stationed there for 2 years I found that the Clean Air Act that had been passed, which outlawed the use of soft coal for burning in fireplaces, had made a vast difference and that in the first winter I was there we had only 3 or 4 very heavy fogs where you could not see across the street. And I mean this literally and I had never believed it until I went to London, I took my children out on the street, a street as wide as this room is deep, and I said, "You go across the street, I want to look and see you," and it was impossible, you could not see that distance in London. But much of it came from the smoke, the air pollution from the coal fires.

My last command at sea was an icebreaker in the Arctic and until the last year or two I did not look back and remember the kind of pollution we were causing, although in the Arctic it doesn't make much difference, but it is impossible for a diesel electric ship of great power to go full speed ahead and hit the ice and then back down full speed to get out of the ice without causing great quantities of black smoke out of the smokestacks. It is not possible to eliminate that kind of pollution.

Right here in St. Louis when I was transferred here for my last duty assignment in March of 1968 as District Commander of Coast Guard Forces, I lived in a little section called Town and Country 13 miles west of the District Office on Market Street and as I drove in every morning about 8 o'clock on just two lanes of highway I could drive in at 40 or 45 miles an hour all the way and get downtown in something like 20 minutes. But each month that I lived here of that 3-1/2 years as District Commander the traffic got worse and by the time I left in July of 1971 we had three ribbons of road on each side but it took me between 35 and 40 minutes to go the same distance and the air pollution was measurable by nose.

This is the past. And today we have many pluses and some minuses in air pollution problems. We have gone from small cities with few vehicles to million people cities with hundreds of thousands of vehicles. And if we were to make a graph the abscissa of which would be time and the ordinate of which would be amount or number and start with engine efficiency, that is emission, rather, of pollutants, you would find a gradual decline over the years. The efficiency is improved, the pollutants are down. But the increase in the number of vehicles has been so rapid, so sharp, that the multiplication of those two elements, number of vehicles times pollutants, is vastly increased even though in general the efficiency of the engines has improved.

In railroad trains and engines we have had a tremendous improvement from the coal engines to diesel electric to electric and turbo trains of today. And in ships we have had even greater improvement, from the coal burning ships to the oil burning ships to the modern gas turbines today and some nuclear ships where pollution of the air is zero, I believe.

But we haven't kept pace on land as far as bus, truck, automobile are concerned. We have improved the efficiency, but we have also increased the horsepower so greatly that the amount of pollution, as all of you know, is tremendous.

In the air we have improved the efficiency of the engines, but we have also again increased the number of engines per aircraft and the tremendous horsepower output so that in spite of the increased efficiency, power output per element of fuel, the amount of pollutants have increased. So the progress in efficiency has been overwhelmed by the increase in the number of vehicles that are polluting the air.

In the Department of Transportation, as many of you know, we are taking strong steps with the automobile industry to reduce air pollution--catalytic converters, new kinds of engines. But those of you that happened to see the article in the paper last night that I read when I came in from Kansas City, this was a shocker. One man complained that his 1973 automobile stalled because of this new equipment. Another one complained that he couldn't start his car, part of it because of this new equipment. And the third man, who owned a Lincoln Continental, which probably had a 450 cubic inch engine with some 350 or 400 horsepower, he was only getting 3.7 miles per gallons and he couldn't pass any gas station. He made 75 miles on one tank of gas.

One of the Department of Transportation's big pluses has been its work in getting people out of the private cars and into good mass transit. In not very many places have we been able to do this, but Shirley Highway in Washington is one example. Mr. Volpe, who is my former boss, is very proud of this. I think probably it was one of his pet babies. He provided exclusive bus lanes on a stretch about 13 miles long south of Washington and he has movies to show that these beautiful buses, new, comfortable, well equipped and full, go into Washington at 60 miles an hour, 13 miles in 13 minutes, where the lanes beside these buses are full of bumper-to-bumper automobile traffic, one man per vehicle, with an average time of 40 minutes to go 13 miles and sometimes more.

Amtrak is another plus, we think, the Department of Transportation's strong work in passenger train travel. And on the East Coast the new turbo trains between Washington and New York and Boston, they are so full and so popular that we have had to import two turbo trains from France on a lease basis to help fill the gap while we build new turbo trains to take up the slack. And one of the important pluses where we mesh transportation, where we have true intermodel transportation, is that on the outskirts of Washington you can drive to a station, park your car, get on the turbo train, go to New York or Boston, come back and pick up your car, without going into the city at all. This reduces pollution by reducing the number of cars that are driving and by putting more people on one kind of transportation which has minimum pollution.

We have laws with teeth--NEPA. Just a few weeks ago, Department of Transportation found that Ford employees were tampering with the emission results of the new Ford engines, falsifying the results. Mr. Ford and his company were fined several million dollars. I can't say whether it was Jerry

Svore's outfit, EPA, which collected the million dollars in fines or whether it was DOT, but Mr. Ford paid and he paid without a fight. The laws are important and the laws do have teeth.

Department of Transportation is no stranger to pollution problems, environmental problems. In the environmental impact statement field, which includes air quality and air programs, in 1972 there were 2,800 environmental impact statements prepared in the entire country. About 1,500, more than half of those, were prepared by the Federal Highway Administration of DOT.

The most difficult problem that DOT has today, the one that they are really concerned about, is how to get you and me out of our private cars to drive to and from work. You know, a private automobile is the most comfortable, responsive thing that we have. When I get up in the morning and get in my automobile, it does just what I tell it to do. It is not like my wife. If I tell her to do something that day and I lay out a schedule of events and things she is supposed to do, the chances are if I get 50 percent of it I am lucky. But I get 100 percent out of my automobile. It goes in the direction I want it to, it goes fast or it goes slow, it gets hot or it gets cold, air conditioning or heat, and I can sit there by myself and scratch my tummy and sing or talk to myself and nobody knows and it doesn't make any difference to anybody. That's one of the reasons it is so hard to get us out of our cars. But it has got to be done.

In just the year and a half that I have had this wonderful job as representative of the Secretary of Transportation, and I drive in from my home in Johnson County 13 miles into the office, the traffic on Ward Parkway has increased measurably. They are building vast quantities of homes out our way--Jerry Svore and I live out that way--homes by the hundreds and every home has got two cars.

Mr. Volpe made some recommendations about this problem of people and cars. He suggested that there might be two alternates to consider. One, make the parking fees so high in downtown Washington that lots of people would take public transportation and leave their cars at home.

The other one would be to put a head tax on people coming in to encourage car pools. If one man comes in it costs him $2. If two people come in that same car it only costs him $1. But if you get three or more it wouldn't cost anything. The outcries that came from those two recommendations you wouldn't believe. The gnashing of teeth and the wailing were horrible. He had to back down. He didn't get any place.

In Cambridge, Massachusetts, we have a systems analysis center with some very capable and fine scientists. I talked to one of them on the phone the other day. They are working vigorously on a mathematical model which will quantify transportation pollution emissions. This is a most difficult thing because there are so many variables. They are starting with a space and time constant, a block of air space and a certain period of minutes or hours, and into this space and time module they are going to pour a special quantity of different kinds of gases and then they will measure how long it takes for these gases to disperse. They will compute, because many of the gases have different types, different characteristics. It would determine or try to figure out how fast the gases will dissipate and which will stay behind longest.

But then into this module you have got to work temperature, humidity, wind direction and velocity, things of that nature. So here for every one set of constants you have got hundreds and hundreds of variables.

After they get this mathematical simulator set up and they actually work it a few thousand times with computers, then they are going out in the field and calibrate it against a set of known emissions. They could go right out here to Lambert Field and select for themselves with test equipment a little block of air space in the middle of the field, say 100 feet cube, 100 foot cube, on a calm day. They know the exact amount of emissions of every airplane engine made today. We have that information. They will measure, they will count the number of aircraft taking off in a given period of time in that particular area and they will know exactly how much exhaust comes from each one of those airplane engines.

And then with test equipment, they tell me, they will measure how much gas of various types comes into this castle, how long it takes to disperse, where it goes, and other things that they want to quantify. This is their calibration method.

If this actual test meshes with what the mathematical formulae say, then they are in business and they will continue calibration and working formulae and working the simulation and pretty soon, with the aid of computers, they can come up with a tremendous amount of data which we think and they think will be of extreme help, great help, to the country, to the CEQ, to the EPA.

And this is a responsibility of the Department of Transportation. The leverage on the airplane companies is great.

For the future we have some exciting transportation vehicles and plans. Out in Pueblo, California, there is a brand new test center with a special track and they have built and tested what they call a TACV, a track air cushion vehicle, which runs on the power from a linear induction motor with absolutely no pollution, almost noiseless. It has been tested at 180 miles an hour and it will, the scientists say, make 300 miles an hour. It is a wonderful piece of equipment, but it costs like crazy. It is extremely expensive.

Another element of transportation which has great promise is the PRT, personalized rapid transit. It is like a horizontal elevator. They have some demonstration projects in effect now and they had four of these at the big transportation show at Dulles Airport about a year ago. It is on a track or a monorail and if you are at a certain station you press a button and this little passenger car comes up, takes you on board, holds only 4, 6 or 8 people, and then you press a button where you want to go, 2 or 3 or 5 or 7 miles away. And if nobody in between presses a button at a next station, you go nonstop. If there are people intervening, they can press their button and you go into that little station and take off again. Pollution free, quiet. Expensive.

Admiral R. R. Waesche

We are working very strongly on new kinds of automobile and truck engines. Most of you have heard about the Wankel rotary engine and at some symposium of transportation people just a few weeks ago the automobile people were bemoaning the fact or they were bulkheading Mr. Ruckelshaus with the plea that they could not meet the air quality standards for these engines by 1975. And a Japanese man, whose Japanese company builds the Wankel rotary engine in their automobile in production now, said, we'll take care of it. The Wankel engine is reputed to be very low in exhaust emission.

We need improved mass transit systems for our meshing of intermodel transportation. And here the St. Louis problem is one of the greatest and the worst in the country. Within the last 3 or 4 years Urban Mass Transportation Administration of DOT has provided St. Louis with millions of dollars of matching funds to study and design a rapid transit system for St. Louis, an 86-mile rail-like system which the Department of Transportation has approved in principle but will give no more money either to engineering, feasibility studies or capital grants to build the system until St. Louis can prove that it has a bus system, a feeder system, which will live and work and be available at the time that this mass transit system is finished.

And the Department's position is perfectly honest and proper, because if there is no place to go for the people when they get off at the end of the line of this rapid transit system to take the buses to go home, there is no sense in building the system. The papers are full today, yesterday and tomorrow of the bistate transit problems. We think they will be solved. If they are not solved, the DOT is not going to help with a mass transit system that is going to cost between $1.5 and $2 billion here in St. Louis.

There is new Department of Transportation legislation in Congress now which provides that the Highway Trust Fund can be used flexibly by major cities and by states. Part of that money would go for improving air quality if the States and the cities so decide. This legislation is having a great deal of trouble in the Congress of the United States, particularly in the House of Representatives, because the highway lobbyists, those who believe in what they call the highway, the sacred Highway Trust Fund, they do not want that money to be spent for anything except roads. And we believe that the big cities have the most terrible crisis right now in their land transportation problems and that this kind of money should be used for mass transit.

So the road to clean air is long, it is rocky, it is expensive, and it is necessary to travel that road. And with the Council on Environmental Quality, with NEPA and EPA, with the understanding of the general public which we believe we are getting, and with the full cooperation among Federal, State and local officials who have the responsibility, what must be done will be done.

MR. BARNES: Thank you very much, Admiral Waesche. I think you have given the Board a very excellent review of the various programs and perspectives that the Department of Transportation has that may offer us some assistance in the problem of trying to bring the air pollution problems under control in this country.

(Admiral Waesche's written statement follows:)

DEPARTMENT OF TRANSPORTATION
SECRETARIAL REPRESENTATIVE
REGION VII

Meeting of the
President's Air Quality Advisory Board
on
Urban Air Pollution Problems
March 29, 1973

THE FUTURE OF AIR QUALITY AS IT RELATES TO INTERMODAL TRANSPORTATION

Presented by
RADM R. R. Waesche, USCG (Ret.)
Secretarial Representative, Region VII
Department of Transportation

The effect of the Department of Transportation's policies and programs upon our daily lives is significant. Every man, woman, and child in the United States depends upon transportation for his or her livelihood, health, welfare, and recreation. Our modern society demands and requires a complex, intermodal transportation system. Furthermore, each of these modes affects the air quality where it operates. This, then is the major problem facing the Department of Transportation: Protect our environment and natural resources while at the same time providing a transportation system that will insure the social, economic, and physical well-being of our nation.

To give some perspective to the scope and magnitude of the problem, each year Americans drive more than one trillion miles (that's a million-million miles or about 5,000 times the distance from the earth to the sun and back), we fly several billions of miles, and we generate the movement of about two trillion ton-miles of freight (one ton-mile is one ton of freight that is transported one mile, or two tons transported one-half mile, etc.).

This movement of people and goods is not surprising when we recognize that this country has more than 3-1/2 million square miles of land and more than 200 million people, two-thirds of which live on less than 10 percent of the land.

Bunching or grouping of people into our "modern-day metropolitan centers" also groups together the emission sources that degrade the air quality of our cities. It is our cities that suffer from air pollution, a portion of which is emitted from transportation systems and facilities. Transportation emissions in our large cities are receiving the highest priority of our environmental programs.

The Department of Transportation discharges traditional Federal responsibilities for highways, airports and airways, railroads, urban transportation, the St. Lawrence Seaway, transportation safety, and the operation of the United States Coast Guard. Included in these responsibilities is the requirement to eliminate or at least minimize the environmental impact of Federal policies and actions. There can be no question of the Department's response to environmental problems. Not only are we required by law to protect the environment, I would remind you that the Department is 100,000 people who live next door, work in the next building, and enjoy the same recreation as you do. We desire the same clean and healthy environment that you do.

The Department of Transportation was created by Congress and signed into law by President Johnson to "assure . . . (a) coordinated, effective administration of the transportation programs of the Federal Government; to facilitate the development and improvement of coordinated transportation service; . . . to encourage cooperation of Federal, State, and local governments, carriers, labor, and other interested parties toward the achievement of national transportation objectives; to stimulate technological advances in transportation, to provide general leadership identification and solution of transportation problems . . ." The National Environmental Policy Act of 1969 demands that we consider the environment in planning and decision making; that we identify and develop methods and procedures to assure protection of the environment, and include environmental impact statements on all proposals for legislation and other Federal actions which might significantly affect the quality of the environment.

Executive Order 11507 implements the National Environmental Policy Act and directs that the DOT provide "leadership" in pollution abatement. Executive Order 11514 directs Federal agencies to monitor, evaluate, and control pollution so as to enhance and protect the quality of the environment. Environmental considerations were included in the Department of Transportation Act of 1966. Section 2(a) of the DOT Act states that the general welfare of the nation requires "the development of national transportation policies and programs conducive to the provision of fast, safe, efficient, and convenient transportation at the lowest cost consistent therewith and with other national objectives, including the efficient utilization and conservation of the nation's resources." Section 2(b) of the Act continues ". . . special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and water fowl refuges, and historic sites." The Urban Mass Transportation Act of 1970, the 1970 Federal-Aid Highway Act, and the Airport and Airways Development Act of 1970 all direct the Department of Transportation to protect and enhance natural resources and the quality of the environment of the nation.

Within the above context, I would like to discuss DOT's present efforts in improving air quality through implementation of transportation alternatives, and then our present and future efforts to increase our knowledge of transportation's relationship to air quality. Finally, I will discuss transportation programs that are designed to support air quality, as well as other social and environmental goals.

Good transportation planning is obviously important in developing sound proposals for relating transportation to air quality standards. In this connection, areawide transportation planning is funded through the Department's airport, highway, and mass transit programs, and is a required prerequisite to Federal-aid for transportation projects. Federal-aid for transportation systems planning totaled $54 million in fiscal year 1972.

Air Transportation

The Federal Aviation Administration has completed several programs in which the ground operation of airports and airport design as they relate to emissions has been analyzed, and has made significant advances in the mathematical modeling of aircraft emissions with a view to reducing emissions.

Substantial progress has been made in reducing visible emissions from all new technology aircraft engines. FAA has contracts under way with engine manufacturers to further reduce aircraft-emitted pollutants. With DOT encouragement, private air carriers have been retrofitting their aircraft engines to reduce substantially the amount of smoke emitted.

Exclusive Bus Lanes

Our transportation planning efforts are developing plans for new rapid transit systems in many major metropolitan areas. There is a great deal that can be done less expensively to use transportation programs to achieve air quality goals.

For example, in the Virginia suburbs of Washington, D.C., Federal highway grant funds have been used for the construction of a reversible, exclusive bus lane down the center of Shirley Highway (Interstate 95) for a distance of about 9 miles into the city. Since September 1969, transit ridership in the area served by this lane has increased by over 250 percent, while automobile commuters in the corridor have actually decreased in absolute numbers. The number of commuters entering Washington from this corridor by bus now exceeds the number entering by auto--a complete reversal of the previous condition, with resulting air quality benefits.

In Seattle, the Department of Transportation assisted in the development of the Blue Streak project. This involved express bus service from fringe parking lots, utilizing free-flowing freeway lanes and exclusive bus ramps into the downtown loop. Transit patronage has increased, and a survey of riders from one fringe parking lot indicated that 70 percent had previously driven to work.

Urban Corridor Demonstration Program

An overall approach to non-capital intensive transportation improvement is the Department's Urban Corridor Demonstration Program. This program, which began in 1970, is a joint effort of the Department's Urban Mass Transportation Administration and Federal Highway Administration, and is coordinated through DOT's Office of Environmental Affairs. Its purpose is to test and demonstrate the concerted use of the available programs of these two modal Administrations in relieving peak-hour congestion in corridors leading to and from central business districts. For example, Atlanta, Georgia, is one of the 11 cities chosen to participate in the planning phase of the program. A staggered working-hours program in the central city is being effected which should reduce peak-hour transportation requirements. The other elements of that city's Urban Corridor Demonstration Program include such projects as improved central business district transit distribution, expanded park-and-ride facilities, and a network of signs which would direct traffic onto alternate routes and thereby bypass the congestion that occurs on its six radial interstate highways. Each of these aspects of the Urban Corridor Demonstration Program can contribute positively to achieving air-quality goals.

All of the above intermodal transportation efforts will contribute toward improved air quality. We still have a great need for more detailed facts and information to be able to quantify these efforts on air quality. Then we will be in a better position to test alternative transportation systems to determine the mix of modes that will optimize air quality.

Let me brief you on current DOT efforts designed to increase our knowledge of transportation effects on air quality.

The Department of Transportation has chosen the mathematical simulation approach to provide insight on the mode emissions and the ultimate effect on ambient air quality. Transportation air pollution modeling has been divided into two closely related tasks: Mode Emission Source Models and Mode Atmosphere Dispersion Models. The Emission Source Model specifies the mode's emissions in spatial and temporal terms. The Atmosphere Dispersion Model distributes and transforms the (calculated) pollutants according to the transport and diffusion characteristics of the atmosphere.

To validate the mathematical simulation models, we must have hard engineering data on each mode's emission factors and rates, in addition to ambient air quality information.

Our goal in modeling efforts and field studies is to better understand the movement of freight and people so as to be able to minimize transportation related air pollution in a cost-effective manner. The models calculate the ambient air concentrations surrounding the particular transportation source or facility for each pollutant emitted.

Combining the calculated concentrations with the known or anticipated background concentrations, a comparison can be made with the primary and secondary ambient air quality standards established by the Environmental Protection Agency.

From this comparison, the need for control of the mode's emissions can be determined, and how much of a reduction is required for an existing facility or system. The impact of a proposed facility can be ascertained in a like manner. If a reduction in emissions is required from an existing facility, or system, and with the amount of reduction known, control techniques can be evaluated and a control strategy formulated.

In summary of what I have just stated, DOT is attempting to model the operation of each transportation mode as it operates within the urban complex to determine the spatial and temporal emission rates of exhaust pollutants. We are then using these emission rates as inputs to our atmospheric dispersion models to determine the effect on the ambient air quality. It would be a pleasure to announce today that DOT has working, validated models for each mode. I'm sorry that this is not the case; but in the time remaining, I will briefly outline our overall program approach conceived to develop and validate such models.

The Department of Transportation established The Transportation Systems Center in 1970 to provide a focal point within DOT for the sharing and exchange of technical, planning, and economic understanding concerning transportation systems and facilities. The Transportation Systems Center's expertise includes the assessment of environmental impacts of transportation and is the focal point for Emission Source and Atmospheric Dispersion Modeling for the Department.

On Tuesday, Mr. Phil Allen spoke on EPA's Regional Air Pollution Study and the other St. Louis Air Pollution Studies. One of these studies, Technology for Environmental Analysis, is sponsored by the Office of the Secretary of Transportation (OST) and is being conducted by the Environmental Measurements Branch of The Transportation Systems Center. DOT is intimately involved in the St. Louis Air Pollution Studies and is coordinating its efforts through the Interagency Liaison Panel of the Interdepartmental Committee for Atmospheric Sciences. I would like to stress the position of DOT that we feel there is much to be gained in reducing air pollution by the Department cooperating to the fullest extent possible in the St. Louis Air Pollution Studies.

The goals of the Technology for Environmental Analysis Program (TEA) are to: (1) Develop and refine the technology for transportation impact analysis, and (2) ascertain the environmental impact of each transportation mode. TEA is composed of four technology tasks: (1) Analysis Techniques are devoted to the development and evaluation of microscale source and pollutant dispersion models, (2) Measurements and Instrumentation utilize conventional and advanced techniques for the quantitive assessment of transportation emissions and environmental impacts, (3) Control Technology is directed toward the reduction of undesirable transportation emissions, and (4) System Analysis includes data analysis and interpretation, development of advanced environmental impact parameters, criteria and analysis techniques.

The Technology for Environmental Analysis Program is the umbrella program for DOT's involvement in St. Louis. The Federal Railroad Administration, through their Rail System Pollution Assessment Program, conducted by the Transportation Systems Center, is quantifying the air pollution potential of railroad operation and facilities. The field studies will be a portion of DOT's activities in the St. Louis Air Pollution Studies. Information from the U. S. Coast Guard's Vessel Pollution Abatement Program, Vessel Emission Monitoring and Control, again being conducted by the Transportation Systems Center, will be utilized to ascertain the air pollution attributible to the vessel and barge traffic on the rivers of St. Louis.

The Federal Highway Administration is participating in the Technology for Environmental Analysis Program by providing, through the State and local traffic departments, highway traffic information that will be utilized by the Transportation Systems Center and the Environmental Protection Agency in their Regional Air Pollution Study. In a similar manner, the Federal Aviation Administration is providing aircraft traffic information for the St. Louis Air Pollution Studies.

Mass Transportation

Mass transportation, usually rail or bus, results in much lower emission levels than the automobile per passenger mile of travel. Improvements in mass transportation systems reduce total emissions when these improvements effect reduction in the percentage of travel by automobiles. The percentage of reduction in emissions must be estimated on a system-specific basis. To cite one system-specific example, a study for DOT's Office of Environmental Quality by the Metropolitan Washington Council of Governments concluded that completion of any of several alternatives to improve transit in that urban region would be effective in reducing emission levels. It was estimated that the first 33 miles of the Washington Metro Rail System, which is now under construction, would reduce carbon monoxide, hydrocarbon, and nitrogen oxide emissions on the order of 6 to 8 percent. Completion of the full 98-mile Metro would reduce emission rates by 14 percent for carbon monoxide, 10 percent for hydrocarbon, and 15 percent for nitrogen oxide. (Reference 1)

For those cities that do not have rapid rail service in existence or under way, the most promising mass transportation improvements in support of the 1976 ambient air standards would be improvements in bus service. Effective alternatives would include exclusive bus lanes on freeways and in the central business district grid, as well as route changes and increases in the dependability and frequency of existing routes. But improved mass transit service alone may not be sufficient to attract ridership. Auto restraints may also be necessary.

Automobile Restraints

Automobile travel restraints may be effective when coupled with improvements in mass transit. Restraints could include such alternatives as increased downtown parking fees, reduced number of downtown parking spaces, auto-free zones, and reduced taxi cruising.

Doubling to quadrupling downtown parking fees could effect 5 to 25 percent reductions in motor vehicle emissions, according to an EPA study (Reference 2).

Auto free zones have a good potential in areas where there is high concentration of pollutants, such as Washington, D.C., where 1968 emission densities in the central business district were found to be up to 100 times greater than some fringe locations (Reference 3).

Improvement in Traffic Flow

Low-capital investments to improve traffic flow can be effective in reducing auto emissions. For example, improvements in intersection signalization and traffic lane channelization can reduce stop and go driving and thereby reduce emissions per vehicle mile of travel. The effect on emissions of measures to improve traffic flow should be the subject of system-specific study such as the report previously cited for the Washington metropolitan area.

Highway and Urban Mass Transportation Legislation

The Administration's 1973 highway and mass transit legislation program, which was recently sent to Congress, will allow us to make great strides in implementing true intermodal transportation measures that will enhance air quality as well as other national goals.

Let me outline key provisions of that legislation.

The cornerstone of the legislation is the provision of sufficient flexibility in the use of Highway Trust Funds to enable state and local officials to solve their crucial urban transportation problems. In some major metropolitan areas, achieving better air quality would certainly be one of the crucial issues.

The proposed bill authorizes for the Federal-Aid Urban System, from the Highway Trust Fund, $1.1 billion for FY 1974, $1.2 billion for FY 1975, and $1.35 billion for FY 1976. Transportation projects on the urban system shall be selected by the appropriate local officials, after consultation with the state, and in accordance with the transportation planning process.

In order to encourage the development, improvement, and use of public mass transportation systems, and to increase efficiency of the Federal-aid systems, the above sums of money may be used to finance the Federal share of the cost of construction and acquisition of facilities and equipment for public mass transportation projects. Such projects may include bus lanes, passenger loading shelters, parking facilities to serve public transportation passengers, construction of fixed rail facilities, and purchase of passenger equipment such as buses, or rolling stock for fixed-rail facilities.

Any equipment purchased under the above provisions must meet the standards prescribed by the Administrator of EPA under Section 202 of the Clean Air Act.

Also, to insure that local officials have resources to tackle their urban transportation problems, for urbanized areas having a population of 400,000 or more, urban system funds apportioned to the state which are attributible to these areas shall be allocated to them. If an agency exists within the area that meets certain criteria necessary to insure implementation of transportation projects, the funds shall be made available directly to that agency.

The proposed legislation also provides for setting aside one-half of one percent of Federal-aid funds for the use of metropolitan agencies responsible for carrying out the urban transportation planning process. This provision should assist in the development of transportation systems which include a mix of modes that will meet our social, environmental, and economic goals.

Relation to Other Activities

As I noted earlier in the presentation, transportation serves our need for mobility as we strive for other goals.

A crucial effect of transportation on the urban environment is the relationship between transportation and land use. Transportation is not only a user of land, but more importantly, it plays a major role in inducing and controlling other land uses. In many American cities, the effect of transportation on land use has not been carefully evaluated in advance. Land use effects have followed from transportation decisions, rather than vice versa. Some communities are choosing to make a conscious decision as to the type of urban development they want, which in turn leads them to a certain type of urban environment and associated transportation system.

In summary, intermodal transportation is a key element in land use and air quality, and can be used positively and imaginatively to achieve community goals. We believe that transportation must represent an opportunity, rather than an obstacle, toward achieving our goal of environmental quality.

REFERENCES:

1. Estimating Auto Emissions of Alternative Transportation Systems, Metropolitan Council of Governments, Washington, D.C., April 1972

2. Evaluating Transportation Controls to Reduce Motor Emissions in Major Metropolitan Areas - An Interim Report, Institute of Public Administration

3. Air Quality Criteria for Carbon Monoxide, NAPCA, Publication No. AP-67, March 1970

MR. BARNES: At this point are there any questions from any members of the Board regarding any of the things that perhaps the Admiral dealt with in his statement or things that would be within the Department of Transportation's purview?

Dr. Lohse.

DR. LOHSE: Admiral, I realize that the Department of Transportation has other budgetary responsibilities such as the Coast Guard, but within the total departmental budget I would like to ask you this question:

What percent of the budget at this time has a direct impact upon reducing the present level of pollution problems? Do you feel that this percent is sufficient? And if it is not sufficient, as a long-time expert in planning for the Department of Transportation, how would you suggest that the department's budget be restructured to address the Nation's pollution problems?

ADMIRAL WAESCHE: There is no way to estimate how much of our budget is devoted to air pollution or air pollution problems because the elements of the budget are not divided up that way as far as I know. The flexible funding program of which I spoke in the legislation is the type of program which the department uses and it depends upon the importance of each one of the programs in the department which gets the most money.

But only recently there has been set up within the Department of Transportation a department or a section on air quality which is headed up by Martin Conviser, the environmental man, and his efforts have been in the line of getting more money for these programs. I don't think you ever have enough money, all the money that we really need, but I do believe that both Mr. Volpe and our new man, Mr. Breniger, are committed to the importance of requiring a very strong increase in our program of air quality.

MR. PRINCE: Admiral Waesche.

MR. BARNES: Mr. Prince.

MR. PRINCE: Just approximately, do you have any idea what it would cost for this country to really make an efficient and modern mass transit system that would work throughout the country?

ADMIRAL WAESCHE: You mean for each major city? You wouldn't want a mass transit system to run all over the country?

MR. PRINCE: No, but I mean it would have to be for the major urban areas.

ADMIRAL WAESCHE: You would have to divide it up among the cities of different sizes. For St. Louis, a population of approximately 2.4 million, it would be very close to $2 billion. I don't know how much BART cost. I think BART cost a little bit more than that, but BART in San Francisco is a much longer program and, of course, it required tunneling under the Bay. I would guess the cost out there at approximately $3 billion.

But each city is so different. In Kansas City, for instance, right now Urban Mass Transportation Administration has given MARC, Mid-America Regional Council, a quarter of a million dollars for a study of what their transportation in mass transit should be. They are going to find out that part of it should be underground, because you can tunnel through Kansas City, it has got enough hills and you are not going to disrupt transportation the way you have in Washington, D. C., which is the worst mess I ever saw in my life.

There is no way to make a categorical statement about cost because there are so many variables. But if you take a modern city of the size of St. Louis, $2 billion, I think, would be a good estimate.

MR. PRINCE: Going one step further, does the department or do you personally have any ideas on which way mass transit should go, whether it should be combustion engines, general combustion engines, or electric or any other form of power? Have they given this thought and have they come up with any recommendations?

ADMIRAL WAESCHE: Yes. We would like to have either a trackless or rubber-tired rail system for big cities which would be electric, some type of electric, so it would be noiseless and nonpolluting. In the smaller cities it would have to be some kind of a bus system, because the smaller cities could not support a rail-like system which could not be flexible.

I think there are officials in the department who could give both of you gentlemen considerably more information on these subjects than I. I don't have that kind of background or expert understanding.

MR. BARNES: Dr. Donaldson.

DR. DONALDSON: Admiral Waesche, it would seem that most of the technology was really available to solve these problems. We know how to build an electric bus. The real problem, as I see it, is one of generating public acceptance.

ADMIRAL WAESCHE: That and the cost, yes, sir.

DR. DONALDSON: Well, public acceptance of the costs that are involved. And yet the budget of DOT is far larger for examining new technology and really playing with far-out technology than it is for generating public acceptance.

Would it not be a good thing to consider really making a major effort by one of the governmental agencies, and I don't think this would be the Department of Transportation, to generate public acceptance to explain the thing to them? I think that the impetus for asking for such things has been left to a number of private enterprises that really work very hard at it but don't have anything like the clout that the Department of Transportation would have if it were to tackle this job.

ADMIRAL WAESCHE: Yes, sir. This involves a mass media, a mass public information or public relations attempt. The Congress has traditionally been nonresponsive on our requests--I speak of my service in the DOT--nonresponsive on requests for measurable sums of money for public relations or public information. If the CEQ would make that recommendation, present it for the Department of Transportation, this would give us a great impetus that we have not had before.

DR. DONALDSON: I agree with you, that is something that really should be done.

MR. BARNES: Thank you very much, Admiral, for being with us this morning. We really appreciate your taking time to come over and talk to the Board.

(Witness excused.)

MR. BARNES: As I introduce the next witness, I might give just a little bit more background about this particular meeting. One of the things that the Administrator of EPA had in mind when he asked the Board to come to St. Louis was to look at the kind of socioeconomic impact on the people of imposing the air pollution standards on a given community, what's the effect on the lives of the individuals involved. One can certainly see some gains that would come from living in a city where the air is better to breathe and where you are less likely to exacerbate health problems. At the same time, what other changes may come about in people's lives in terms of whether you are closing down plants or moving jobs farther away or whether you are opening up new transportation systems, and so on.

And our next witness is Ms. Freddie Mae Brown, who is the President of Black Survival here in St. Louis, and who has, I think, in a rather short time put together a rather impressive background of dealing with a variety of projects and goals and organizations particularly in the innercity environmental area.

At this point we would like to hear from her. She will make a presentation and then be available to the Board for questions.

Ms. Brown.

MS. FREDDIE MAE BROWN
PRESIDENT, BLACK SURVIVAL, INC.
ST. LOUIS, MISSOURI

MS. BROWN: Thank you.

Good morning. I have to carry this with me because there is something I have to do a little later.

After that introduction I am wondering if I should say anything.

I have one thing that I want to pass down for the members to take a look at and just carry it all the way down.

And I have something else that is close, not close enough, really, but it is simply the cleanest story ever told. We should be talking about the cleanest air ever.

This I would like you, sir, to start down, take a look at this, and let it go all the way down. I think that will in essence in picture form encompass what it is I want to cover.

Now if I can find the speech, I will be in good shape. Here we are.

How many of you have seen the research and monitoring report from the Environmental Protection Agency? I think it is something that is kind of hot off the press. I think it is very recent. They have a number of programs within EPA now in terms of the shift of a number of responsibilities. It looks like EPA is going to be it in terms of not only air pollution, but water as well as other urban problems associated with socioeconomic problems.

Too bad you haven't seen this. You really should. I intend to make reference to this later in some of the parts. I am not sure of how many of you have heard about something they call CHESS, Community Health and Environmental Survival and Studies program, which we find extremely interesting, especially as it relates to urban areas and what they will be doing.

How many of you have seen this report, Urban Air Pollution Problems? I think this too is a hurried report put together. In this particular report there is a lot of things that I think we could have already begun to do just from some of the things that I see in here in terms of information, if the information is accurate.

I would like to ask the advisory board how many of them know what is being used in their home, office, factory, et cetera, et cetera, to clean clothes, the office itself? And would they take the material being used and do this with it? (Spraying her throat.)

If you would, I dare you. I dare you.

Not only is that biodegradeable, you could drink it, but I would challenge all of you in terms of talking about action in reference to environmental problems on one hand and then the things that we are using, say, to clean up our research factories in one day is contributing a lot more to it. We are talking about getting rid of on one hand and perpetuating on the other.

By the way, gentlemen, I am the local distributor of Bestline Products. You see, all of us have to work more than one job just to keep abreast and to survive. I am sure you gentlemen probably would like to--

I keep looking for a woman on the panel. I am trying to figure out if that young lady there (indicating) is the Mrs. I saw, but none of the other gentlemen look like a woman to me.

Are you a member of the panel?

UNIDENTIFIED YOUNG WOMAN: Me?

MS. BROWN: Yes.

UNIDENTIFIED YOUNG WOMAN: No.

MS. BROWN: O. K., then. I saw a Mrs. on the sheet and I wanted to see her.

MR. BARNES: Mrs. Hamilton, who is from Dallas, Texas, has not been with us during this meeting of the Board, but she is a member of the Advisory Board.

MS. BROWN: Thank you. Still not quite enough color, gentlemen.

First of all, let me tell you a little bit about Black Survival, Inc. It is made up of residents of the inner-city and suburbia. As a matter of fact, our secretary-treasurer is here now and that is Mr. Jack McCall.

Jack, would you stand so they can see what we mean when we say black and white?

We think all the colors of this world has got to be involved in really bringing about some effective changes in the many problems we have. I have heard certain people divide the ecological movement. They have separated it out, pulled out one area in reference to clean air, water, green grass, and some other things, and then they pulled all of the people out of this area and they put them over here (indicating) and decided, well, now, we will have to do something different from you, from what we are doing over here, because you are not really that important, you see. And somehow it must be brought together because all birds, you know, be they yellow bellied sapsuckers, bald eagle or whatever, and no people, and all the green grass and whatever and no people.

When we talk about air problems, period, it seems that the innercity person gets more of everything bad and none of what is good. Listening to the Admiral earlier talking about coming out 12 miles or so, 12 or 13 miles or something from where he lives to the city, you can't make me believe that if the Admiral did live in that city there wouldn't be some improvements made much quicker. I don't think we have to think in terms of transportation as making sure everybody can get farther away quickly, but making sure that people can move around quickly within the area.

It brings to mind something else that we have been fighting about like hell and that is a north-south distributor highway. Our State Highway Commission or Planning Commission somehow seems to be determined to divide the east from the west. We have said we don't want that. There is another way. We have even suggested an alternative and it would cost a lot less money. But, you see, some smartie can sit down and put together all of this, and this is how it will work, you know, he has looked at this paper and he has decided that is how it will work, there will be so many going over there and so many going over here. Well, I'm fed up with that kind of shit. They haven't seen me nor have they talked to me nor would they talk to me. And when I say "me" I am speaking of people in the community, people in that community that is going to be affected by this.

I talk about the right to breathe, and I guess I came up with that title because I thought about, too, the inversion that St. Louis had not too long ago. You know, it dawned on me, just who has the right to breathe if people don't? I heard some legal things about having inalienable rights, then there are things about civil rights, but who has the right to breathe? I mean somebody seems to be taking it away from people that may be a little less fortunate or somebody is using up ten times the amount they should, not only in terms of air but other things as well and I am sure you know that.

There is two or three paragraphs that I do want to read. Have you noticed in the presentation that you have I did make reference to the Nature Study magazine, the winter '71-72 issue. Well, it was kind of interesting to me because I understand I am the first black woman to ever be put in a nature magazine of any kind on any subject. I am also tired of being the first and the only. That is why I know we have got to do better in terms of our educational programs to the total community, the total community.

There is a lot of writing. And the thing about it, a lot of the things that we were talking about 3 years ago,

Ms. F. M. Brown

I guess you can say there has been a smidgen of progress, and I mean a smidgen, because a lot of the things that we were talking about 3 years ago I now see in administrative EPA's comments in a number of places.

I remember trying to get to talk to a Mr. Carol Thomas, who is, I understand, the civil rights administrator, director, something. I remember also trying to reach Mr. Ruckelshaus on a number of occasions, have yet to have any success. And believe it or not, I was interested to see what they looked like and what they sound like and that is the other part of my reason for being here. I might have to be here all day, probably. But I would like to see who it is running these things.

You have heard a lot of statistics and if you have this in front of you, you may want to read it yourself. This would be page 2, really, technically page 2; the front is the cover. But you talk about:

> B. While air pollution is a problem in the whole metropolitan area, the highest concentration is in the inner city where most of the minority population lives.

We say most but not all. You have, again, colors of people and not all one color.

Ms. F. M. Brown

You have heard about and you know about the fact that very often minorities do not work within the factories and industrial plants that gives the biggest problems. I still remember a situation in East St. Louis where persons was being so polluted by the air coming from the Monsanto plant, I believe, that the people developed rashes, their gardens were killed, you know. As yet nobody has paid for this. And it happened to people who don't have very much in the first place and to come out and see your garden covered with something when you went to all that trouble long before there was an ecological movement, because this is the way you thought it should have been done anyway.

I ask you who has the right to breathe? We have a number of acts including the air act. I said that to somebody and they said, you mean what? I said the air act, you know, Clean Air Act. I am not really sure what it is supposed to do. It sounds good when you read it.

But I think the Governor put it well earlier when he talked about effective action. I don't intend to stand here and read everything that I have written word for word. I could never do that. Hopefully you may want to take a look at some of the things that I have alluded to.

Other than to say thank you for having invited me, I wanted to see Miss Sharon Gascon, whom I talked to and hadn't seen. I am kind of fed up with the names and no faces. And if they are around, Miss Rowena Martin. Mr. Svore I know, there he is. Mr. is it Beans or Baines, the acting chairman?

MR. BARNES: Mr. Barnes.

MS. BROWN: Barnes. I sure fixed it, didn't I?

(Laughter.)

But I wanted to thank all of you for having allowed me an opportunity hopefully to have been heard. But again, panel, I recommend that you read some of the reports and things that have been put together already and I think has a lot of good information. I didn't say it all is, some. There is still a lot of work to be done.

Now, if there are some questions, I will try to answer them.

MR. BARNES: Well, thank you very much for your opening statement. Just by way of a comment I might mention that Carol Thomas, who is the Director of EPA's Office of Civil Rights and Urban Affairs, is with us this morning and will be talking to the Board this afternoon. But he is located here and he said that he would be pleased to sit down and chat with you.

And Miss Sharon Gascon, who you referred to, who is the kind of acting executive secretary of the Board, is sitting here also at the end of the table.

(Ms. Brown's written statement follows:)

THE RIGHT TO "BREATHE"

Testimony presented to:
Presidents Air Quality Board U.S.E.P.A.
Thursday, March 29, 1973
Stoffers' Riverfront Inn
St. Louis, Missouri
10:30 a.m. by:

Ms. Freddie Mae Brown
President
Black Survival, Inc.
4859 Fountain Avenue
St. Louis, Missouri 63113
(314) 367-9618

First of all I'm sure many of you would like to know who and what is Black Survival Inc. Residents of inner cities and suburbias, Black, White, affluent, and poor make up Black Survival, Inc.

Black Survival, Inc. was formed on January 18, 1970, out of growing concern over the Quality of Life within the poor White and Black inner city and affluent suburbia. The organization has members in Illinois and Missouri portions of the metropolitan area who believe that the definition of environmental problems that has been acceptable to some segments of the community such as air, water, and land pollution, must be broadened to include human ecology in Black and White communities, and particularly in relationship to the rural poor White and Black people.

Black survival played a major role in bringing the concerns of the First National Environmental Teach-In in April, 1970 to the metropolitan community.

Since Earth Day, Black Survival has directed its energies to the problems of organization and preliminary efforts to reach people in the St. Louis metropolitan area. The group was incorporated as a Missouri Not For Profit on May 11, 1970. Three years ago, Board of Black Survival, Inc., have been involved in preparing material for the news media, radio and television and have met with a number of groups to explain the concern of Black Survival, Inc. and its reason for being.

The right to "breathe" who has it? Descrimibation and racism in terms of air quality the degrees of clean air geographically. Have created a living environment for the Poor White and Black people that has added up to enclaves of disorganization, chaos and total environmental insult.

The insistance that we need a Highway called North-South. Distributor spliting the downtown east section of the city from the Wests State Highway commission and city planning commission doesn't understand the word no.
The right to breathe, Black Survival, Inc. has also entered a lawsuit a number of groups against the city of St. Louis in order to force the Air pollution control agency to divulge the information it has on pollution control agency to divulge

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the information it has on pollutants released into the air by manufacturing companies in the city which report to it. We have to this date to receive any kind of report. We don't want nor do we need that kind of polarization on any level.

Let me refer you to page 12, Nature Study Magazine, Winter 1971-72 Issue presentation delivered by me at ANSS Symaplom Nature Law and Environment. Philadelphia, December 29, 1971 Section B. United Effort

B. While air pollution is a problem in the whole metropolitan area, the highest concentration is in the inner city where most of the minority population lives.

C. Proportionately, the residents of the minority community do not work at the industrial factories that cause the pollution. Yet these same minorities, because of locale, must pay more in terms of property value depreciation, days lost from work, cost of health care, household and personal cleaning cost, general physiological depression and inother ways.

D. Who has the right to "breathe"?
Air pollution from automobiles is said to be responsible for 85% of the air pollution problem, producing about 90% of all deadly carbon monoxide. Because most of the major highways funnel into the inner cities, deadly pollutants from automobiles tend to be very high in these areas, where most of the minority population is forced to reside.

G. Who has the right to "breathe"?
Findings from recent medical studies indicate that from the age of two or three, children raised under conditions of high pollution begin to show evidence of permenent malfunction.
Although these children are not going to die, what will happen is that in 20 to 30 years, as a result of the slow, chronic response to environmental insult, they will certainly suffer from some form of chronic disorder, such as chronic pulmonary disease.

Now may I refer you to Federal Register Wednesday, January 10, 1973 Washington, D.C. Volume 8 Number 6 part III page 1258 Second column Second paragraph EPA'S New Health Position

EPA's new health position is based upon the following factors. Currently, considerable numbers of urban residents have abnormally elevated blood lead levels resulting from excessive exposure to environmental lead principally through food, water, paint, air and dust. Emissions from motor vehicles using leaded gasoline account for over 90 percent of the lead emitted into the atmosphere. The result ing airborne lead can: a.

Be directly absorbed through the lungs as people breathe, or (b) settle out of the air to contaminate the dirt and dust which may be consumed by children. Strong evidence to support the view that through these routes airborne lead contributes to excessive lead exposure in urban adults and children.

Same Federal register, same page third column beginning with (see table llb) studies

> (see table llb). Studies of urban women are especially significant since blood levels in newborn babies are known to be well correlated with lead levels in expectant mothers.

Black Survival, Inc. feels this point must be made crystal clear: We the People of Planet Earth not only have the right to breathe but also are as much a part of natural resources as the red wood trees, the yellow belly sap sucker and the very precious Bald Eagles.

In reading the Presidents water pollution control and air quality advisory boards purpose the second paragraph states that:

> Both Boards have now been incorporated into the Environmental Protection Agency. and are chaired by the EPA Administrator. By law, the Boards are to advise, consult with, and make recommendations to the Administrator on EPA policy matters within their jurisdiction.

We of Black Survival Inc. would regret terribly if the testimony given here today is not in their jurisdiction.

Let me refer you to Nature Study Magazine Winter, December 29, 1971. Again, same issue as mentioned earlier page 13. Third column reverse the order of paragraphs... they read thusly. "paragraph 4 - 1 paragraph 6 - 2 paragraph 5 - 3.

> A scientist in the best sense does try to see a real world problem and seeks to solve it. But now such solutions are far removed from any real feel of the people and the struggle to improve the quality of life for all. However:

2. Because we don't talk with understanding, many modern scientists are Frankensteins as much as the original holder of that name. Too often their work directly increase unfavorable changes in the quality of life for all.

3. Solutions to complex environmental ie: air, water problems do not depend simply on the use of known science by professionals given enough money to do so. Solutions are dependent on the ability of professionals to understand, relate to, and serve people - particularly the people most affected by the possible disastrous side affects.

We of Black Survival, Inc. believe nevertheless we all had better be about the real justyfiable struggle for Survival.

MR. BARNES: I think some of the Board members had some questions that they would like to follow up with you on.

Dr. Lohse, you had a question?

DR. LOHSE: Yes, I do.

Ms. Brown, I came to the meeting knowing you were going to be on the program and anticipating with considerable professional anticipation that I could get some information from you which would be directly relevant to the function of this Board and could be woven into our final conclusions and our recommendations which will be sent to the White House and to Mr. Ruckelshaus. And with that anticipation still in my mind, I am going to make a comment and ask you a question.

First let me say that I am sure you are aware that the redefinition of environmental responsibilities of the Environmental Protection Agency to include human economic levels is dependent upon the will of the Congress, the legislative branch of the government, and is not the prerogative of the Environmental Protection Agency and the administrative branch. Mr. Ruckelshaus simply has to put into effect, define and enforce the law which is handed to him by the Congress and if the Congress fixes the responsibility of the agency, that thereupon sets the limits of Mr. Ruckelshaus's authority.

The responsibilities of the agency, as I understand them, do not include a direct study, direct work with economic levels, but rather with solid waste, air pollution, noise, pesticides and water pollution. I would urge you to take your very excellent stand and your great moral conscience and persuasive position, with which many of us are in total accord, to your community of representatives, because I think your message should be heard in Washington, but I would presume to instruct you or suggest to you that the more effective route is through your elected representatives and not through an agency such as this whose responsibility is set by Congress.

But now along with the information I would like to have from you if you will assist me, in an effort to obtain a direct input from the citizenry of the Nation, as you know, various committees in the Congress have public hearings. Early in 1972 there were some important hearings held by the Subcommittee on the Environment, which is within the Senate Committee on Commerce, and from these public hearings came--and I am not talking about the Senators, but I am talking about people such as yourself which put direct input from the citizens of the Nation into the Senate, you see, and help them make up their mind what is proper to do--came this very emphatic statement and conclusion. It said:

> The solid waste management is perhaps the most visible and most important environmental problem of the inner city.

And again over here in another place, another witness said:

> I would say that the solid waste is the major problem. The physical health and psychological impact of the solid waste problem of the inner city I think is the most severe environmental problem.

Now, remembering that our responsibility includes solid waste and air pollution, noise, pesticides and water pollution, and not economics, let me ask you what is your opinion of the most important inner city environmental problem, defining environment only as we are able to do so? Is it solid waste? Is it air pollution? What within our authority is the thing to which we should turn our attention?

MS. BROWN: I have seen the same report you have, sir. I also have something else here in front of me. And you remember I said earlier maybe there has been some progress because we are now seeing some of the things that we were talking about a few years ago, at least on paper. People are beginning to do something.

As for my opinion as to what is the most important, I would say first of all the right to breathe. You know, if we are not around here we are not going to have to bother about none of the other stuff.

I would still say the right to breathe. And in terms of the inner city, this to me would be the best place to start. And this seemingly is where you have the biggest problem. And I think you know that, that same report you've got lets you know that.

It also tells you something about not only people with respiratory ailments but other things like sickle cell anemia and the fact that we found not only blacks with it but whites as well. Again this too is not limited to any particular one color as we have been led to believe. And that inner city air pollution has a special problem and a special effect on these individuals.

So you know, it would seem to me when you start talking about anything that has to do with people and you talk about their health and well being, then you have got to be talking about a health area and you have also got to be talking about the very survival and existence of that human being. And if you can't breathe, you know, there is nothing.

DR. LOHSE: Thank you.

MR. BARNES: Thank you very much for being with us this morning. I know a number of the EPA staff members who are here would enjoy talking with you informally when we take a break here and pursuing some of these things that you have mentioned informally.

Our next speaker this morning will be discussing the role of the Department of Housing and Urban Development in the land use and environmental area.

We are pleased to have with us this morning the Deputy Regional Administrator from the Department of Housing and Urban Development, Mr. Harry Sharrott from the Region VII HUD office.

HARRY I. SHARROTT
DEPUTY REGIONAL ADMINISTRATOR
U. S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
REGION VII

MR. SHARROTT: Gentlemen, it is a real pleasure to be here this morning and to convey the best wishes of my boss, Elmer Smith, the Regional Administrator of HUD in Kansas City.

He has very recently been designated as Acting Chairman of the Federal Regional Council and is today meeting with the Governor of Nebraska in Lincoln in connection with those additional responsibilities as well as his HUD responsibilities. It is with very real pleasure that I can be here today for him to deliver his remarks.

As Deputy Regional Administrator of the Department of Housing and Urban Development, I welcome this opportunity to acquaint the distinguished members of the President's Air Quality Advisory Board with our views and activities on the areas of land use planning and environmental quality. Normally I would have begun a talk with an organization such as yours with a description of the great things HUD has been doing with housing, with urban renewal, with environmental problems like water and sewer, and with open space preservation and development. However, this is not a "business as usual" bureaucratic approach of administering paternalistic grant programs to attack urban problems.

The impact of legislation in force such as NEPA and general revenue sharing are changing the importance, scope, and concept of land use planning. Acts proposed such as the Better Communities Act and various special revenue sharing programs are further impacting the planning scene, and they are high on the priority list for early consideration by this Congress. And an additional factor has come into consideration as the world ponders the energy crisis and a pending food shortage that will concern environmentalists, planners, and governmental officials at all levels.

First let's talk about the speech I would have given. It's important that we examine the history that has brought us to where we are today. For the last several decades the Federal Government has carried out a tremendous program of redesigning the urban landscape, often without a realization as to cause and effect. Separate programs reshaped the way we live, where we work, and how we both benefit and suffer because of the change.

The Federal Housing Administration and the Veterans Administration literally enabled millions of moderate and middle income Americans to become homeowners. But the housing built as a result of FHA and VA was not "Federal housing." It was privately built, designed, and planned, and was made available to the general public through a Federal mortgage guarantee. Because the housing was built and sold by private enterprise, the businessmen involved undertook ways to meet competition, cut costs, and further reduce the price of housing to survive in their chosen and crowded field.

This brought another factor into play. As developers found that the farm surpluses held down the need for agricultural land, they rapidly developed that land around the cities and towns, with a whole new set of needs and problems resulting. We needed water and sewer systems for the new suburbs, so we set up a program to provide that. We needed better roads and highways so the new suburban residents could get to work so we set up a program to provide that. We needed new and better schools for the children of suburbia, so we set up a program to provide that. We needed parks and open space, and so on, and we kept finding new needs and new problems. We then set up piecemeal programs to meet those problems.

Meanwhile, back in the old central city, local officials were screaming about what was happening in their city. Housing was deteriorating since those who could not afford to buy the new homes were left behind, and no one realized that those left behind could not even afford to maintain the housing there. So public housing was created. Downtown business districts began to decline, so central business district renewal was created. Residential districts began to decline, so we had residential renewal, rehabilitation, and neighborhood development programs. Social problems accelerated so we expanded welfare, community action, and Model Cities programs to meet these needs. Low and moderate housing needs continued to grow, so we set up the subsidized housing programs.

Thus programs piled upon programs. Agencies proliferated to design them, to run them, to coordinate them. We built a system that few leaders of government at any level could understand, comprehend, or utilize. There was no way a mayor, county executive, governor, or even a Federal cabinet member could have a real impact on bringing about a coordination of the programs, working away year after year to solve the problems. I do not mean to imply that the programs were total failures or that the administrators were inept or that they did not have an impact. President Nixon noted in his better communities message that, and I quote, "Americans today are better housed than ever before in our history," and went on to say that "the house of crisis has passed." He added that although many urban problems persist, "fears of doom are no longer justified."

The President directed that every agency review its programs to see if there is not a better way to meet the needs of American life. Can a problem be solved by turning the program and the funding over to local or State officials?

Are there substitute systems that will enable individual citizens to meet their own needs?

Secretary Lynn accepted that challenge, stating recently that HUD is looking at all of the activities of the department, reaffirming that HUD will continue to study alternative approaches such as the housing allowance process, turning over more funds and responsibilities to States,and looking hard at our tax laws. He also committed the department to complete a reassessment of housing programs within 6 months to meet the President's deadline for submission of a new housing program to the Congress this year.

That is a capsule analysis of where we are now and how we got there but now back to the changes that are upon us and their impact upon land use and environmental planning.

As I said earlier, the factors that created suburbia and its attendant problems are either changing or disappearing. Environmental, financial, and aesthetic considerations are making it increasingly difficult to construct urban freeways and expressways. Suburbia cannot exist without transportation and that system is now exclusively the private car.

Utility systems are finding it increasingly difficult to expand their systems because of the energy crisis and also because of fiscal considerations. Recipients of water and sewer grants in recent years are more frequently the central cities who are pressed to upgrade old deteriorating systems, and this change will have a large effect in shifting the priority for water and sewer funding from suburbia to the central city.

And in area after area increasing pressures to restore the vitality of cities has shown the same shift in funding for open space, municipal services and development. I would note that the Better Communities Act will concentrate the bulk of available funding in the central cities, and the shift from suburbia will accelerate as local government leaders will use those funds to make up for lost time in meeting the needs of the total metropolitan area.

Also in the community development portion of the State of the Union series, the President urged the Congress to permit local officials to receive funds from the massive Highway Trust Fund to build and maintain rapid mass transit systems. Admiral Waesche has well acquainted us with the problems there.

Additionally, Better Communities recognizes that the problems of cities have an impact far beyond the municipal boundaries or even beyond the developed suburbs. Here it recognizes that the government level closest to the problems and best able to coordinate the planning needs of such areas is the State government. States will play a greatly expanded role in areawide and metropolitan planning agency operations and city community development activities will be required to be in accord with such planning.

For many years the Federal Government has dealt with cities on a direct basis, bypassing State governments. I might note that States, with serious problems of their own, were often happy to let the Feds and cities take that responsibility. Now, however, States are also finding that city problems are their problems, and State departments of community affairs, State planning departments, transportation departments, and environmental departments are reorganizing and staffing up to assume the leadership necessary.

We do have a long way to go. Professional State salaries in our region tend to be substantially below similar salaries in major urban departments. If States are to attract the leadership talent needed to do the job, they are going to have to bid in a diminishing pool of trained comprehensive planners and administrators. Colleges and universities will have to increase emphasis on directing students to careers in the urban challenge. And State and local officials will have to accept the responsibility and the heat in areas where they were able to put the Feds on the line in the past.

To assist the States and localities in developing and maintaining the capacity to meet their responsibilities effectively, the proposed Responsible Governments Act will build upon the present Comprehensive Planning Assistance Program, our present 701 program. The act will be funded at $110 million in fiscal year 1974 and will provide assistance in basically four areas:

Developing and analyzing information needed to identify problems and opportunities;

Developing and analyzing alternative policies and programs;

Managing and coordinating the implementation of programs; and

Evaluating the results and proposing proper adjustments.

Major changes were previously made in the 701 Comprehensive Planning Assistance Program which is particularly pertinent to the problems that I have recently discussed. Local and State officials have had to try to do that for years, but it's a new experience for many Feds, I'm sorry to say.

It is that use of the Better Community Act tied to the remaining categorical programs that will enable local government officials to restructure local cities. I do not share the fears of those who predict that local officials will waste this opportunity to rebuild their cities. They may change some of the priorities that I might have as a Federal official, but they will operate within a framework of locally developed priorities and goals to be established under the Better Communities Act and through the planning and management tools of the Responsive Governments Act.

The funding for capital improvements and for social concerns available from those acts will enable local officials to decide where development will occur, and I think there is very little doubt that they will concentrate on revitalizing their central cities as the hub from which the sense of community will re-emerge.

That concentration of funding will be directed by the local elected officials who must be responsive to the voters. They cannot tolerate program failures, scandals, or unnecessary delays in accomplishing their task. There will be no Federal review of projects under those Better Communities Act plans to be submitted to HUD. The local mayor won't be able to say, "It's HUD's fault because they approved it." It will be a local project, planned, designed, built, and operated locally. It will return responsibility and power to local government.

The environmental, financial and aesthetic considerations, then, will be coupled with this concentration of local planning and project funding under the Better Communities Act to reverse the tendency to urban sprawl into a revival of in-town development.

I would hope that this opportunity will bring about closer cooperation and, where appropriate, joint research and use of studies, such as the St. Louis Regional Air Pollution Study, for land use planning which will be of mutual interest to ourselves and enhanced benefit to the State and local governments.

Also, the food crisis in the world is changing the value of agricultural land so that it will appreciate in value at a much higher rate than for non-agricultural use. This,too, has serious implications for future suburban development.

This, then, summarizes the perplexing problem faced by land use planners. Many of the principles of planning that had almost been assumed to natural law are now obsolete. Management planners and budget planners are also having to reexamine and rethink their long-range and even their short-range projections and plans.

The major thrust of the several national land use policy bills has been to put State governmental powers behind rational land use planning. In essence, the bills propose to escalate certain critical land use decisions from the local to the State level. Such critical decisions might well include the designation of sites of regional importance for metropolitan housing projects and new communities, each featuring a balance of housing types and costs.

Certainly there is need to develop appropriate environmentally-oriented land use implementation plans. However, unless environment is understood to be defined in the broadest terms, this idea will prove to be frustrating in that such plans cannot be developed isolated from the other land use needs and public policy objectives. Indeed, the problem is to take these pluralistic values and from them develop a set of priorities and an allocation of resources which will both protect the environment and meet other objectives.

In addition to protecting the natural environment and preventing pollution, one would have to consider such other problems as overcrowding, central city decay, traffic congestion, wasted and excessive public service and infrastructure costs, lack of accessibility to jobs and cultural amenities, racial and economic segregation, disproportion of economic growth, poor housing, inadequate public services, fiscal and tax base deficiencies. All of these and more are related to land use planning and must be considered along with the environmental protection objectives.

In the environmental area, HUD is moving ahead on a number of research projects including continuing studies of urban noise, for which the department has also set criteria and standards. Work is in progress with the Geological Survey on earth sciences; with the National Oceanic and Atmospheric Administration to reduce earthquake hazards; and with the Environmental Protection Agency in innovative technologies in waste disposal, particularly with HUD's Operation Breakthrough. Total energy systems, mine surface subsidence, air pollution related to land use, and radiation from the use of uranium mill tailings are other areas of concern.

To pull these projects together and to implement the findings into other activities of HUD, Secretary Lynn recently combined the Office of Research and Technology with the Office of Policy Development under a single assistant secretary. This should help to overcome the tendency of many research study recommendations to sit on the shelf and assist in getting them worked into the ongoing programs and activities of HUD.

In this era of change we are going to see new patterns of operation that are going to have a domino effect on all of the agencies and participants involved. One key example is the recent letter from the Regional Administrators of EPA, Department of Transportation, and HUD to the Board of the East-West Gateway Coordinating Council setting forth a joint position agreed upon by each of the involved Federal agencies. The letter set down one set of conditions for recertification of east-west, and was the first such combined agency letter in any metropolitan planning agency. Such agreement among Federal agencies on a single set of requirements, a single certification approach, was unheard of a few years ago.

We still have a long way to go before the Federal Regional Council System does enable the Federal Government to function as a single body, but the beginnings of that effort are evident. They will grow. And the implications of that unity will give us better planning, better use of our tax dollars, and, for HUD, will enable us to fulfill the Department's stated 25-year goal of a decent home and a suitable living environment for all Americans.

Thank you.

MR. BARNES: Thank you very much. I think you have given us a very excellent overview of what we can expect from the Department of Housing and Urban Development, also some perspective of some of the past programs and indications of where you will be going.

(Mr. Sharrott's written statement follows:)

REMARKS BY

Harry I. Sharrott
Deputy Regional Administrator

Region VII
U. S. Department of Housing and Urban Development

TO THE

Meeting of the
President's Air Quality Advisory Board

St. Louis, Missouri

March 29, 1973

AS DEPUTY REGIONAL ADMINISTRATOR OF THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, I WELCOME THIS OPPORTUNITY TO ACQUAINT THE DISTINQUISHED MEMBERS OF THE PRESIDENT'S AIR QUALITY ADVISORY BOARD WITH OUR VIEWS AND ACTIVITIES ON THE AREAS OF LAND USE PLANNING AND ENVIRONMENTAL QUALITY. NORMALLY, I WOULD HAVE BEGUN A TALK WITH AN ORGANIZATION SUCH AS YOURS WITH A DESCRIPTION OF THE GREAT THINGS HUD HAS BEEN DOING WITH HOUSING, WITH URBAN RENEWAL, WITH ENVIRONMENTAL PROGRAMS LIKE WATER AND SEWER, AND WITH OPEN SPACE PRESERVATION AND DEVELOPMENT. HOWEVER, THIS IS NOT A "BUSINESS AS USUAL" BUREAUCRATIC APPROACH OF ADMINISTERING PATERNALISTIC GRANT PROGRAMS TO ATTACK URBAN PROBLEMS.

OVER TWO YEARS AGO, PRESIDENT NIXON PROPOSED HIS PLAN FOR A "NEW AMERICAN REVOLUTION" TO REDIRECT THE EFFORTS OF THE FEDERAL GOVERNMENT, TO RETURN LOCAL PROBLEM SOLVING TO LOCAL OFFICIALS, AND TO BRING THE SKYROCKETING FEDERAL BUDGET UNDER CONTROL. THE REACTION TO THAT SPEECH BY THE NEWS MEDIA WAS A MIXTURE OF YAWNS, DISINTEREST, AND SKEPTICISM. YET, TODAY THAT REVOLUTION OF GOVERNMENTAL PHILOSOPHY IS HERE, IT IS REAL, IT IS CHANGING OUR CONCEPTS OF GOVERNMENT, OF PROBLEM SOLVING, OF IMPROVING THE QUALITY OF LIFE.

THE IMPACT OF LEGISLATION IN FORCE SUCH AS NEPA AND GENERAL REVENUE SHARING ARE CHANGING THE IMPORTANCE, SCOPE, AND CONCEPT OF LAND USE PLANNING. ACTS PROPOSED SUCH AS THE BETTER COMMUNITIES ACT AND VARIOUS SPECIAL REVENUE SHARING PROGRAMS ARE FURTHER IMPACTING THE PLANNING SCENE, AND THEY ARE HIGH ON THE PRIORITY LIST FOR EARLY CONSIDERATION BY THIS CONGRESS. AND, AN ADDITIONAL FACTOR HAS COME INTO CONSIDERATION AS THE

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WORLD PONDERS THE ENERGY CRISIS AND A PENDING FOOD SHORTAGE THAT WILL CONCERN ENVIRONMENTALISTS, PLANNERS, AND GOVERNMENTAL OFFICIALS AT ALL LEVELS.

FIRST, LET'S TALK ABOUT THAT SPEECH I WOULD HAVE GIVEN. IT'S IMPORTANT THAT WE EXAMINE THE HISTORY THAT HAS BROUGHT US TO WHERE WE ARE TODAY. FOR THE LAST SEVERAL DECADES, THE FEDERAL GOVERNMENT HAS CARRIED OUT A TREMENDOUS PROGRAM OF REDESIGNING THE URBAN LANDSCAPE. OFTEN WITHOUT A REALIZATION AS TO CAUSE AND EFFECT, SEPARATE PROGRAMS RESHAPED THE WAY WE LIVE, WHERE WE WORK, AND HOW WE BOTH BENEFIT AND SUFFER BECAUSE OF THE CHANGE.

THE FEDERAL HOUSING ADMINISTRATION AND THE VETERANS ADMINISTRATION LITERALLY ENABLED MILLIONS OF MODERATE AND MIDDLE INCOME AMERICANS TO BECOME HOMEOWNERS. BUT THE HOUSING BUILT AS A RESULT OF FHA AND VA WAS NOT "FEDERAL HOUSING". IT WAS PRIVATELY BUILT, DESIGNED, AND PLANNED, AND WAS MADE AVAILABLE TO THE GENERAL PUBLIC THROUGH A FEDERAL MORTGAGE GUARANTEE. BECAUSE THE HOUSING WAS BUILT AND SOLD BY PRIVATE ENTERPRISE, THE BUSINESSMEN INVOLVED UNDERTOOK WAYS TO MEET COMPETITION, CUT COSTS, AND FURTHER REDUCE THE PRICE OF HOUSING TO SURVIVE IN THEIR CHOSEN AND CROWDED FIELD.

THIS BROUGHT ANOTHER FACTOR INTO PLAY. AS DEVELOPERS FOUND THAT THE FARM SURPLUSSES HELD DOWN THE NEED FOR AGRICULTURAL LAND, THEY RAPIDLY DEVELOPED THAT LAND AROUND THE CITIES AND TOWNS, WITH A WHOLE

NEW SET OF NEEDS AND PROBLEMS RESULTING. WE NEEDED WATER AND SEWER SYSTEMS FOR THE NEW SUBURBS, SO WE SET UP A PROGRAM TO PROVIDE THAT. WE NEEDED BETTER ROADS AND HIGHWAYS SO THE NEW SUBURBAN RESIDENTS COULD GET TO WORK, SO WE SET UP A PROGRAM TO PROVIDE THAT. WE NEEDED NEW AND BETTER SCHOOLS FOR THE CHILDREN OF SUBURBIA, SO WE SET UP A PROGRAM TO PROVIDE THAT. WE NEEDED PARKS AND OPEN SPACE, AND SO ON AND ON WE KEPT FINDING NEW NEEDS AND NEW PROBLEMS. AND, WE THEN SET UP THE PIECEMEAL PROGRAMS TO MEET THOSE PROBLEMS.

MEANWHILE, BACK IN THE OLD CENTRAL CITY, LOCAL OFFICIALS WERE SCREAMING ABOUT WHAT WAS HAPPENING IN THEIR CITY. HOUSING WAS DETERIORATING SINCE THOSE WHO COULD NOT AFFORD TO BUY THE NEW HOMES WERE LEFT BEHIND, AND NO ONE REALIZED THAT THOSE LEFT BEHIND COULD NOT EVEN AFFORD TO MAINTAIN THE HOUSING THERE, SO WE CREATED PUBLIC HOUSING. DOWNTOWN BUSINESS DISTRICTS BEGAN TO DECLINE, SO CBD URBAN RENEWAL CAME ALONG. RESIDENTIAL DISTRICTS BEGAN TO DECLINE, SO WE HAD RESIDENTIAL RENEWAL, REHAB, AND NDP. SOCIAL PROBLEMS ACCELERATED, SO WE EXPANDED WELFARE, COMMUNITY ACTION, AND MODEL CITIES PROGRAMS TO MEET THE NEEDS. LOW AND MODERATE HOUSING NEEDS CONTINUED TO GROW, SO WE SET UP THE SUBSIDIZED HOUSING PROGRAMS.

THUS, PROGRAMS PILED UPON PROGRAMS. AGENCIES PROLIFERATED TO DESIGN THEM, TO RUN THEM, TO COORDINATE THEM. WE BUILT A SYSTEM THAT FEW LEADERS OF GOVERNMENT AT ANY LEVEL COULD UNDERSTAND, COMPREHEND, OR UTILIZE. THERE WAS NO WAY A MAYOR, COUNTY EXECUTIVE, GOVERNOR, OR EVEN

A FEDERAL CABINET MEMBER COULD HAVE A REAL IMPACT ON BRINGING ABOUT A COORDINATION OF THE PROGRAMS -- WORKING AWAY, YEAR AFTER YEAR, TO SOLVE THE PROBLEMS. I DO NOT MEAN TO IMPLY THAT THE PROGRAMS WERE FAILURES, OR THAT THE ADMINISTRATORS WERE INEPT, OR THAT THEY DID NOT HAVE AN IMPACT. PRESIDENT NIXON NOTED IN HIS BETTER COMMUNITIES MESSAGE THAT "AMERICANS TODAY ARE BETTER HOUSED THAN EVER BEFORE IN OUR HISTORY." AND WENT ON TO SAY THAT "THE HOUR OF CRISIS HAS PASSED." HE ADDED THAT ALTHOUGH MANY URBAN PROBLEMS PERSIST, "FEARS OF DOOM ARE NO LONGER JUSTIFIED."

THE PRESIDENT DIRECTED THAT EVERY AGENCY REVIEW ITS PROGRAMS TO SEE IF THERE IS NOT A BETTER WAY TO MEET THE NEEDS OF AMERICAN LIFE. CAN A PROBLEM BE SOLVED BY TURNING THE PROGRAM AND THE FUNDING OVER TO LOCAL OR STATE OFFICIALS? ARE THERE SUBSTITUTE SYSTEMS THAT WILL ENABLE INDIVIDUAL CITIZENS TO MEET THEIR OWN NEEDS?

SECRETARY LYNN ACCEPTED THAT CHALLENGE, STATING RECENTLY THAT HUD IS LOOKING AT ALL OF THE ACTIVITIES OF THE DEPARTMENT, REAFFIRMING THAT HUD WILL CONTINUE TO STUDY ALTERNATIVE APPROACHES SUCH AS THE HOUSING ALLOWANCE PROCESS, TURNING OVER MORE FUNDS AND RESPONSIBILITIES TO STATES, AND LOOKING HARD AT OUR TAX LAWS. HE ALSO COMMITTED THE DEPARTMENT TO COMPLETE THE REASSESSMENT OF HOUSING PROGRAMS WITHIN SIX MONTHS TO MEET THE PRESIDENT'S DEADLINE FOR SUBMISSION OF A NEW HOUSING PROGRAM TO CONGRESS THIS YEAR.

THAT IS A CAPSULE ANALYSIS OF WHERE WE ARE NOW, AND HOW WE GOT THERE, BUT NOW, BACK TO THE CHANGES THAT ARE UPON US, AND THEIR IMPACT UPON LAND USE AND ENVIRONMENTAL PLANNING.

AS I SAID EARLIER, THE FACTORS THAT CREATED SUBURBIA, AND ITS ATTENDANT PROBLEMS ARE EITHER CHANGING OR DISAPPEARING. ENVIRONMENTAL, FINANCIAL, AND ESTHETIC CONSIDERATIONS ARE MAKING IT INCREASINGLY DIFFICULT TO CONSTRUCT URBAN EXPRESSWAYS AND FREEWAYS. SUBURBIA CANNOT EXIST WITHOUT TRANSPORTATION, AND THAT SYSTEM IS NOW EXCLUSIVELY THE PRIVATE CAR.

UTILITY SYSTEMS ARE FINDING IT INCREASINGLY DIFFICULT TO EXPAND THEIR SYSTEMS BECAUSE OF THE ENERGY CRISIS, AND ALSO BECAUSE OF FISCAL CONSIDERATIONS. RECIPIENTS OF WATER AND SEWER GRANTS IN RECENT YEARS ARE MORE FREQUENTLY THE CENTRAL CITIES WHO ARE PRESSED TO UPGRADE OLD DETERIORATING SYSTEMS, AND THIS CHANGE WILL HAVE A LARGE EFFECT IN SHIFTING THE PRIORITY FOR WATER AND SEWER FUNDING FROM SUBURBIA TO THE CENTRAL CITY.

AND, IN AREA AFTER AREA, INCREASING PRESSURES TO RESTORE THE VITALITY OF CITIES HAS SHOWN THE SAME SHIFT IN FUNDING FOR OPEN SPACE, MUNICIPAL SERVICES, AND DEVELOPMENT. I WOULD NOTE THAT THE BETTER COMMUNITIES ACT WILL CONCENTRATE THE BULK OF AVAILABLE FUNDING IN THE CENTRAL CITIES, AND THE SHIFT FROM SUBURBIA WILL ACCELERATE AS LOCAL GOVERNMENT LEADERS WILL USE THOSE FUNDS TO MAKE UP FOR LOST TIME IN

MEETING THE NEEDS OF THE TOTAL METROPOLITAN AREA. ALSO, IN THE COMMUNITY DEVELOPMENT PORTION OF THE STATE OF THE UNION SERIES, THE PRESIDENT URGED THE CONGRESS TO PERMIT LOCAL OFFICIALS TO RECEIVE FUNDS FROM THE MASSIVE HIGHWAY TRUST FUND TO BUILD AND MAINTAIN RAPID MASS TRANSIT SYSTEMS. THOSE SYSTEMS WILL SERVE TO REDUCE CONGESTION IN THE CITY, REDUCE POLLUTION, AND RESTORE THE LIVABILITY OF URBAN AREAS. RAPID MASS TRANSIT WILL NOT SIMPLY RESHAPE DOWNTOWN, BUT THE ENTIRE CITY. THE BLOCK GRANT FOR COMMUNITY DEVELOPMENT IN THE BETTER COMMUNITIES ACT WILL ENABLE THE LOCAL GOVERNMENTAL EXECUTIVE TO CONCENTRATE HIS FUNDING TO SUPPORT A MASTER PLAN TYING TOGETHER TRANSIT, DEVELOPMENT, AND SERVICES IN A WAY NOT PRESENTLY POSSIBLE IN ANY GOVERNMENTAL UNIT.

ADDITIONALLY, BETTER COMMUNITIES RECOGNIZES THAT THE PROBLEMS OF CITIES HAVE AN IMPACT FAR BEYOND THE MUNICIPAL BOUNDARIES, OR EVEN BEYOND THE DEVELOPED SUBURBS. HERE, IT RECOGNIZES THAT THE GOVERNMENT LEVEL CLOSEST TO THE PROBLEMS, AND BEST ABLE TO COORDINATE THE PLANNING NEEDS OF SUCH AREAS, IS THE STATE GOVERNMENT. STATES WILL PLAY A GREATLY EXPANDED ROLE IN AREAWIDE AND METROPOLITAN PLANNING AGENCY OPERATIONS, AND CITY COMMUNITY DEVELOPMENT ACTIVITIES WILL BE REQUIRED TO BE IN ACCORD WITH SUCH PLANNING.

FOR MANY YEARS, THE FEDERAL GOVERNMENT HAS DEALT WITH CITIES ON A DIRECT BASIS, BYPASSING STATE GOVERNMENTS. I MIGHT NOTE THAT STATES, WITH SERIOUS PROBLEMS OF THEIR OWN, WERE OFTEN HAPPY TO LET THE FEDS AND CITIES TAKE THAT RESPONSIBILITY. NOW, HOWEVER, STATES ARE ALSO

FINDING THAT CITY PROBLEMS ARE THEIR PROBLEMS, AND STATE DEPARTMENTS OF COMMUNITY AFFAIRS, STATE PLANNING DEPARTMENTS, TRANSPORTATION DEPARTMENTS, AND ENVIRONMENTAL DEPARTMENTS ARE REORGANIZING AND STAFFING UP TO ASSUME THE LEADERSHIP NECESSARY. WE DO HAVE A LONG WAY TO GO. PROFESSIONAL STATE SALARIES IN OUR REGION TEND TO BE SUBSTANTIALLY BELOW SIMILAR SALARIES IN MAJOR URBAN DEPARTMENTS. IF STATES ARE TO ATTRACT THE LEADERSHIP TALENT NEEDED TO DO THE JOB, THEY ARE GOING TO HAVE TO BID IN A DIMINISHING POOL OF TRAINED COMPREHENSIVE PLANNERS AND ADMINISTRATORS. COLLEGES AND UNIVERSITIES WILL HAVE TO INCREASE EMPHASIS ON DIRECTING STUDENTS TO CAREERS IN THE URBAN CHALLENGE. AND, STATE AND LOCAL OFFICIALS WILL HAVE TO ACCEPT THE RESPONSIBILITY AND THE HEAT IN AREAS WHERE THEY WERE ABLE TO POINT TO THE FEDS IN THE PAST.

TO ASSIST THE STATES AND LOCALITIES IN DEVELOPING AND MAINTAINING THE CAPACITY TO MEET THEIR RESPONSIBILITIES EFFECTIVELY, THE PROPOSED RESPONSIBLE GOVERNMENTS ACT WILL BUILD UPON THE PRESENT COMPREHENSIVE PLANNING ASSISTANCE PROGRAM (701) IN HUD. THE ACT WILL BE FUNDED AT $110 MILLION IN FISCAL YEAR 1974, AND WILL PROVIDE ASSISTANCE FOR:

- DEVELOPING AND ANALYZING INFORMATION NEEDED TO IDENTIFY PROBLEMS AND OPPORTUNITIES;
- DEVELOPING AND ANALYZING ALTERNATIVE POLICIES AND PROGRAMS;
- MANAGING AND COORDINATING THE IMPLEMENTATION OF PROGRAMS; AND
- EVALUATING THE RESULTS TO PROPOSE ADJUSTMENTS AS APPROPRIATE.

MAJOR CHANGES WERE PREVIOUSLY MADE IN THE 701 COMPREHENSIVE PLANNING ASSISTANCE PROGRAM, WHICH IS PARTICULARLY PERTINENT TO THE PROBLEMS OF

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LAND USE CONTROL AND ENVIRONMENTAL PROTECTION. IT PROVIDES AN ALMOST UNIQUE FORM OF FEDERAL ASSISTANCE TO AID VIRTUALLY ALL LEVELS OF GOVERNMENT TO CARRY OUT COMPREHENSIVE PLANNING AND TO DEAL WITH THE PROBLEMS OF LAND USE CONTROL THROUGH AN ONGOING PLANNING PROCESS. THIS PROGRAM ORIGINATED WITH SECTION 701 OF THE HOUSING ACT OF 1954, AND DURING THE ENSUING YEARS ABOUT $500 MILLION HAS BEEN DISBURSED TO A BROAD VARIETY OF INTERSTATE, STATE, METROPOLITAN, AND MUNICIPAL PLANNING AGENCIES. (SEE ATTACHMENT I FOR BREAKDOWN OF FUNDING IN REGION VII.)

THERE WILL BE SOME FEDERAL PROGRAMS THAT WILL AND SHOULD REMAIN OPERATIVE AT THE FEDERAL LEVEL. EVEN HERE, THOUGH, DIRECTIONS ARE CHANGING. OMB AND THE CABINET LEVEL AGENCIES ARE SPENDING A GREAT DEAL OF EFFORT ON STRENGTHENING FEDERAL REGIONAL COUNCILS COMPOSED OF THE REGIONAL ADMINISTRATORS OF ALL MAJOR DOMESTIC DEPARTMENTS AND AGENCIES TO COORDINATE ACTIVITIES IN THE FIELD, RATHER THAN IN WASHINGTON. INCREASED DELEGATIONS OF AUTHORITY TO THE FEDERAL REGIONAL COUNCILS WILL MEAN THAT DECISIONS WILL BE MADE BY STAFF "ON THE SCENE" RATHER THAN BY A FACELESS BUREAUCRACY IN WASHINGTON. HOPEFULLY, THIS MECHANISM WILL RESULT IN NEW INFORMAL AND FORMAL MECHANISMS TO DELIVER FUNDS, SERVICES, AND TECHNICAL ASSISTANCE AMONG ALL LEVELS OF GOVERNMENT. THE REGIONAL COUNCIL IN THIS REGION HAS ALREADY BEGUN DETAILED BRIEFINGS OF STATE AND LOCAL OFFICIALS ON COUNCIL PROGRAMS AND HOW THEY FIT INTO THE GOVERNMENTAL REVOLUTION UNDERWAY. FEDERAL AGENCIES THAT HARDLY KNEW WHAT THEIR "ALPHABET SOUP" INITIALS STOOD FOR, NOW HAVE TO COORDINATE

AND UNDERSTAND EACH OTHER'S PROGRAMS. LOCAL AND STATE OFFICIALS HAVE HAD TO TRY TO DO THAT FOR YEARS, BUT ITS A NEW EXPERIENCE FOR MANY FEDS, I'M SORRY TO SAY.

IT IS THAT USE OF THE BETTER COMMUNITY ACT TIED TO THE REMAINING CATEGORICAL PROGRAMS THAT WILL ENABLE LOCAL GOVERNMENT OFFICIALS TO RESTRUCTURE LOCAL CITIES. I DO NOT SHARE THE FEARS OF THOSE WHO PREDICT THAT LOCAL OFFICIALS WILL WASTE THIS OPPORTUNITY TO REBUILD THEIR CITIES. THEY MAY CHANGE SOME OF THE PRIORITIES THAT I MIGHT HAVE AS A FEDERAL OFFICIAL, BUT THEY WILL OPERATE WITHIN A FRAMEWORK OF LOCALLY DEVELOPED PRIORITIES AND GOALS TO BE ESTABLISHED UNDER THE BETTER COMMUNITIES ACT AND THROUGH THE PLANNING AND MANAGEMENT TOOLS OF THE RESPONSIVE GOVERNMENTS ACT.

THE FUNDING FOR CAPITAL IMPROVEMENTS AND FOR SOCIAL CONCERNS AVAILABLE FROM THOSE ACTS WILL ENABLE LOCAL OFFICIALS TO DECIDE WHERE DEVELOPMENT WILL OCCUR, AND I THINK THERE IS VERY LITTLE DOUBT THAT THEY WILL CONCENTRATE ON REVITALIZING THEIR CENTRAL CITIES, AS THE HUB FROM WHICH THE SENSE OF COMMUNITY WILL RE-EMERGE.

THAT CONCENTRATION OF FUNDING WILL BE DIRECTED BY THE LOCAL ELECTED OFFICIALS, WHO MUST BE RESPONSIVE TO THE VOTERS. THEY CANNOT TOLERATE PROGRAM FAILURES, SCANDALS, OR UNNECESSARY DELAYS IN ACCOMPLISHING THEIR TASK. THERE WILL BE NO FEDERAL REVIEW OF PROJECTS UNDER THOSE BETTER COMMUNITIES ACT PLANS TO BE SUBMITTED TO HUD. THE LOCAL MAYOR

WON'T BE ABLE TO SAY, "IT'S HUD'S FAULT BECAUSE THEY APPROVED IT." IT WILL BE A LOCAL PROJECT, PLANNED, DESIGNED, BUILT, AND OPERATED LOCALLY. IT WILL RETURN RESPONSIBILITY AND POWER TO LOCAL GOVERNMENT.

THE ENVIRONMENTAL, FINANCIAL, AND ESTHETIC CONSIDERATIONS THEN, WILL BE COUPLED WITH THIS CONCENTRATION OF LOCAL PLANNING AND PROJECT FUNDING UNDER THE BETTER COMMUNITIES ACT, TO REVERSE THE TENDENCY TO URBAN SPRAWL INTO A REVIVAL OF IN-TOWN DEVELOPMENT.

I WOULD HOPE THAT THIS OPPORTUNITY WILL BRING ABOUT CLOSER COOPERATION AND, WHERE APPROPRIATE, JOINT RESEARCH AND USE OF STUDIES, SUCH AS THE ST. LOUIS REGIONAL AIR POLLUTION STUDY, FOR LAND USE PLANNING WHICH WILL BE OF MUTUAL INTEREST TO OURSELVES AND ENHANCED BENEFIT TO THE STATE AND LOCAL GOVERNMENTS.

ALSO, THE FOOD CRISIS IN THE WORLD IS CHANGING THE VALUE OF AGRICULTURAL LAND SO THAT IT WILL APPRECIATE IN VALUE AT A MUCH HIGHER RATE THAN FOR NON-AGRICULTURAL USE. THIS, TOO, HAS SERIOUS IMPLICATIONS FOR FUTURE SUBURBAN DEVELOPMENT.

THIS THEN SUMMARIZES THE PERPLEXING PROBLEM FACED BY LAND USE PLANNERS. MANY OF THE PRINCIPLES OF PLANNING THAT HAD ALMOST BEEN ASSUMED TO NATURAL LAW ARE NOW OBSOLETE. MANAGEMENT PLANNERS AND BUDGET PLANNERS ARE ALSO HAVING TO RETHINK AND REWORK THEIR LONG RANGE AND EVEN THEIR SHORT RANGE PROJECTIONS AND PLANS.

THE MAJOR THRUST OF THE SEVERAL NATIONAL LAND USE POLICY BILLS HAS BEEN TO PUT STATE GOVERNMENTAL POWERS BEHIND RATIONAL LAND USE PLANNING. IN ESSENCE, THE BILLS PROPOSE TO ESCALATE CERTAIN CRITICAL LAND USE DECISIONS FROM THE LOCAL TO THE STATE LEVEL. SUCH CRITICAL DECISIONS MIGHT WELL INCLUDE THE DESIGNATION OF SITES "OF REGIONAL IMPORTANCE" FOR METROPOLITAN HOUSING PROJECTS AND NEW COMMUNITIES, EACH FEATURING A BALANCE OF HOUSING TYPES AND COSTS.

CERTAINLY THERE IS NEED TO "DEVELOP APPROPRIATE ENVIRONMENTALLY-ORIENTED LAND USE IMPLEMENTATION PLANS." HOWEVER, UNLESS ENVIRONMENT IS UNDERSTOOD TO BE DEFINED IN THE BROADEST TERMS, THIS IDEA WILL PROVE TO BE FRUSTRATING IN THAT SUCH PLANS CANNOT BE DEVELOPED ISOLATED FROM THE OTHER LAND USE NEEDS AND PUBLIC POLICY OBJECTIVES. INDEED, THE PROBLEM IS TO TAKE THESE PLURALISTIC VALUES AND FROM THEM DEVELOP A SET OF PRIORITIES AND AN ALLOCATION OF RESOURCES WHICH WILL BOTH PROTECT THE ENVIRONMENT AND MEET OTHER OBJECTIVES. IN ADDITION TO PROTECTING THE NATURAL ENVIRONMENT AND PREVENTING POLLUTION, ONE WOULD HAVE TO CONSIDER SUCH OTHER PROBLEMS AS OVERCROWDING, CENTRAL CITY DECAY, TRAFFIC CONGESTION, WASTED AND EXCESSIVE PUBLIC SERVICE AND INFRASTRUCTURE COSTS, LACK OF ACCESSIBILITY TO JOBS AND CULTURAL AMENITIES, RACIAL AND ECONOMIC SEGREGATION, DISPROPORTION OF ECONOMIC GROWTH, POOR HOUSING, INADEQUATE PUBLIC SERVICES, FISCAL AND TAX BASE DEFICIENCIES. ALL OF THESE AND MORE ARE RELATED TO LAND USE PLANNING AND MUST BE CONSIDERED ALONG WITH THE ENVIRONMENTAL PROTECTION OBJECTIVES.

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IN THE ENVIRONMENTAL AREA, HUD IS MOVING AHEAD ON A NUMBER OF RESEARCH PROJECTS, INCLUDING CONTINUING STUDIES OF URBAN NOISE, FOR WHICH THE DEPARTMENT HAS ALSO SET CRITERIA AND STANDARDS. WORK IS IN PROGRESS WITH THE GEOLOGICAL SURVEY ON EARTH SCIENCES: WITH THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION TO REDUCE EARTHQUAKE HAZARDS; AND WITH THE ENVIRONMENTAL PROTECTION AGENCY ON INNOVATIVE TECHNOLOGIES IN WASTE DISPOSAL, PARTICULARLY WITH HUD'S OPERATION BREAKTHROUGH. TOTAL ENERGY SYSTEMS, MINE SURFACE SUBSIDENCE, AIR POLLUTION RELATED TO LAND USE, AND RADIATION FROM THE USE OF URANIUM MILL TAILINGS ARE OTHER AREAS OF CONCERN.

TO PULL THESE PROJECTS TOGETHER, AND TO IMPLEMENT THE FINDINGS INTO OTHER ACTIVITIES OF HUD, SECRETARY LYNN RECENTLY COMBINED THE OFFICE OF RESEARCH AND TECHNOLOGY WITH THE OFFICE OF POLICY DEVELOPMENT UNDER A SINGLE ASSISTANT SECRETARY. THIS SHOULD HELP TO OVERCOME THE TENDENCY OF MANY RESEARCH STUDY RECOMMENDATIONS TO "SIT ON THE SHELF" AND ASSIST IN GETTING THEM WORKED INTO THE ONGOING PROGRAMS AND ACTIVITIES OF HUD.

IN THIS ERA OF CHANGE, WE ARE GOING TO SEE NEW PATTERNS OF OPERATION THAT ARE GOING TO HAVE A DOMINO EFFECT ON ALL OF THE AGENCIES AND PARTICIPANTS INVOLVED. ONE KEY EXAMPLE IS THE RECENT LETTER FROM THE REGIONAL ADMINISTRATORS OF EPA, DEPARTMENT OF TRANSPORTATION, AND HUD TO THE BOARD OF THE EAST-WEST GATEWAY COORDINATING COUNCIL SETTING FORTH A JOINT POSITION AGREED UPON BY EACH OF THE INVOLVED FEDERAL AGENCIES. THE LETTER SET DOWN ONE SET OF CONDITIONS FOR RECERTIFICATION OF EAST-WEST, AND WAS THE FIRST SUCH COMBINED AGENCY LETTER IN ANY METROPOLITAN

PLANNING AGENCY. SUCH AGREEMENT AMONG FEDERAL AGENCIES ON A SINGLE SET OF REQUIREMENTS, A SINGLE CERTIFICATION APPROACH, WAS UNHEARD OF A FEW YEARS AGO. WE STILL HAVE A LONG WAY TO GO BEFORE THE FEDERAL REGIONAL COUNCIL SYSTEM DOES ENABLE THE FEDERAL GOVERNMENT TO FUNCTION AS A SINGLE BODY, BUT THE BEGINNINGS OF THAT EFFORT ARE EVIDENT. THEY WILL GROW. AND, THE IMPLICATIONS OF THAT UNITY WILL GIVE US BETTER PLANNING, BETTER USE OF OUR TAX DOLLARS, AND, FOR HUD, WILL ENABLE US TO FULFILL THE DEPARTMENT'S STATED 25 YEAR GOAL OF "A DECENT HOME AND A SUITABLE LIVING ENVIRONMENT FOR ALL AMERICANS."

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FISCAL YEAR 1973 "701" FUND DISTRIBUTION

TARGET AMOUNTS BY APPLICANT TYPE

AREA OFFICE	STATEWIDE	LOCAL ASST/CDS	METRO	NON-METRO	CITIES OVER 50,000	TOTAL
KANSAS CITY						
Kansas	$ 214,000	$ 195,000	$ 150,000	$ 156,000	$ 133,000	$ 848,000
Missouri			350,000		303,000	653,000
OMAHA						
Iowa	$ 315,000	$ 242,000	$ 300,000	$ 111,000	$ 243,000	$1,211,000
Nebraska	194,000	170,000	140,000	87,000	97,000	688,000
ST. LOUIS						
Missouri	$ 363,500	$ 291,000	$ 350,000	$ 291,000	$ 310,000	$1,005,500
TOTAL	$1,086,500	$ 898,000	$1,290,000	$ 645,000	$1,086,000	$5,005,500

ATTACHMENT I

MR. BARNES: Do any of the members of the Board have any questions they would like to direct at this time?

Mr. Prince.

MR. PRINCE: Mr. Sharrott, I would like to say, first of all, I am familiar with HUD programs and I think that because of some of the inadequacies lately it has come in for a bad review over in our neighborhood of Chicago and Detroit. You seem to have a very clear grasp of the situation, you have a good understanding of it.

One thing that I would ask you to comment on is that on page 9 of your statement you mention that the local officials will decide where development will occur, and you also further on mention that there will be no Federal review of projects.

Now, just for the sake of discussion, in Chicago where I live we have had pretty much local control already and because of that local control we have had overdevelopment in the inner city. Our downtown areas are just loaded with skyscrapers and we have got an overconcentration of people, population density, and of course traffic and all of the other associated items. Because of this we have developed one of the worst air pollution problems across the country.

Do you think that if you give this power to local officials without any controls from the Federal level that you are going to have a successful program as far as pollution is concerned?

MR. SHARROTT: Well, your question is the $64 question as far as the thrust of the Administration's basic legislative program. I think you could extend that question well beyond air pollution.

MR. PRINCE: Exactly. It is just too critical, I think, to leave to local decision. I think one of the key efforts in the Federal EPA or, rather, one of the reasons that the Federal EPA's efforts have been successful and are still going to be more successful is because the Federal EPA does reserve the right to step in where these problems develop because of lack of local or coordinated local control. Just an outright gift or grant to local governments--and I am not saying this about all local governments, I am referring to the city of Chicago, but it could happen elsewhere--you just give a blank or a carte blanche to a local area, I think this only creates a bigger problem because there aren't enough people who really know what the problems are and how to put them all together and they can't take a good overview of it. Just to give them carte blanche I think you will create a bigger problem than what it is today.

MR. SHARROTT: That is one of the principal arguments against the concept. I think the President's basic feeling here is that the Feds haven't really done that good a job by themselves and the diversity of legislation and conflicting requirements have made it almost singularly impossible for local officials to put it together.

MR. PRINCE: Right.

MR. SHARROTT: As for the specifics, it is a difficult time for HUD to talk in terms of the future because there are a couple major pieces of legislation we haven't seen yet. The Better Communities Act will obviously be a block rent type of legislative package, but the degree to which Federal review will still be required as to program elements is still highly conjectural. We just don't know yet what HUD's role will be. We don't know what type of application will be required from the local unit of government.

We don't know yet what national goals will be stated clearly in the legislation. Obviously there will be equal opportunity, civil rights types of restrictions, but as to restrictions in terms of planning or setting specific national criteria and national goals and what then the relationship or monitoring relationship will be between local governments and the Federal Government vis-a-vis the State government really hasn't been worked out yet and I submit that that piece of legislation has a fairly rocky road to travel before that bill finally comes out the other end of the legislative process.

So to that degree it is speculative, but your concerns are shared by many people and again it can be the classical bay of power structure in this country and really has the greatest wisdom to spend those dollars.

As far as the President's budget is concerned and the concept of revenue sharing, he in essence is putting his emphasis on local decision.

MR. PRINCE: Is there any--

MR. BARNES: Excuse me just a minute. Mr. Svore would like to make a comment.

MR. SVORE: I just wanted to comment on your question, Mr. Prince.

I think that, you know, there are a few things that have happened within the last couple of years as far as legislation is concerned, not only the air act but the water act, and so forth, and the local planning doesn't give the local community immunity from complying with air pollution control, ambient air quality standards, water pollution standards, and so forth. They must plan within that framework.

So it isn't carte blanche. They have got some restraints on their planning, so you are not going to repeat the kind of a situation you referred to in the Chicago area, at least I hope you aren't.

MR. PRINCE: That is primarily what I was worried about, because does the Department of HUD now have any liaison or people from the EPA staff who advise them of certain problem areas where certain types of construction might be seriously hampering our efforts?

MR. SVORE: We work very closely together on the regional level.

MR. SHARROTT: Through the environmental impact statements, of course, which affects many of our categorical grant programs at the present and that gives a rather full exposure and certainly full coordination with EPA.

MR. BARNES: Mr. Kimball.

MR. KIMBALL: Mr. Sharrott, aside from the Federal regulations in the air and water pollution field, I am concerned about the open space planning, the open space programs that HUD now seems to have abandoned in favor of the local State route. Do you feel that in the overall land use planning process that the overall planning is better done at the local and State level without a Federal presence in this field and taking some of these authorities away from Federal agencies is the better way to go?

It seems to me that the present woeful condition we find in many of our cities and urban areas at the present time is due to the lack of local and State authorities to assume this responsibility, and now to place all of our eggs back in this basket seems to be questionable, but that is the route we seem destined to follow.

Do you agree with this present trend?

MR. SHARROTT: Well, since my boss, the President, has said that is the way HUD will go--

MR. KIMBALL: No, I am not asking about your boss. I want your own feeling. I know his feelings and I know the Federal trend.

MR. BARNES: I think you are saying you want his job?

MR. KIMBALL: No. (Laughter.) I hate to think that--I mean this Board would sort of be an exercise in futility--

MS. BROWN: Right.

MR. KIMBALL: --if we have to go around the country and hear from Federal agencies who are in the essence spouting the Administration line. We are well aware of this.

MR. SHARROTT: I think that--

MR. KIMBALL: And I don't think your job would be on the line. Let's just say this is your own personal opinion, has nothing to do with your job at present, but you are an expert in this field before an advisory board, so tell us what you think.

MR. SHARROTT: I think the way the--well, No. 1, you can't really tell, again, how these priorities are going to work until you see the legislation. The main fear in terms of--

MR. KIMBALL: No, you are missing the point again. (Laughter.) I am not talking about any legislation, I am talking about a concept.

MR. SHARROTT: Right, jumping past that.

The main question that this comes down to is the type of priorities that cities will establish in terms of getting a block of funds. Generally in our field, I think one of the most critical elements here is that through many of our socially oriented programs, such as Model Cities, Urban Renewal, there have been very firm and strong citizen groups develop with very strong citizens. In many of these cases they have been funded groups through CEA's and Model

Cities, through project area committees, and develop a power base. They express again a concern as to how community leaders are going to spend this kitty of money.

It will fall back again I think to a pretty raw political process within each given community that in essence will have to establish local priorities. There are some communities, for example, that will do nothing more perhaps than go out and build swimming pools and street lights. There are others that for reasons, either power politics or through genuine social interest, will highly favor socially related programs.

As to how this mix will eventually come down the pike, I don't know. I certainly have my own strong personal feelings. You can't have been identified with categorical grant programs for 10 years such as I have without having some feeling of trepidation to just, you know, basically abolish and throw all of this back down to a lesser level of government, and I think the problem there is that local government has in essence grown dependent on the Federal Government to make some of these hard decisions for them, these funds have been channeled to specific interests or to specific interest groups, therefore alleviating a great deal of the pressure on local elected officials to make these kinds of hard decisions. All of a sudden that scapegoat, if you will, the Federal Government or the categorical grant program will be removed and these very, very hard decisions will have to be made by local leaders.

As to how open space will fare in this milieu that will result in terms of splitting up these dollars, I don't know. I think it will vary from community to community.

MR. KIMBALL: Well, you have an opinion. Will it fare as well or--

MR. SHARROTT: I would have to say yes. Yes, because from my experience the Federal programs have reached a point of--at least many of our programs have reached the degree of complication that it is just taking an impossibly long period of time to make them work and I think clearly there have been enough failures along with the successes that indicate that major change is needed. With I think the turning the corner in terms of the cities' fiscal characteristics, and I think a lot of cities and particularly States are beginning to turn the corner as far as revenue sources are concerned with the advent and reality of general revenue sharing, I think it is time for a change, yes.

I have really wrestled with this a good deal personally, but my general feeling is that, yes, local officials basically are more responsive and are basically responible and I see no reason why the Feds through specific categorical grant programs should dictate specific blocks and specific buildings that should go into a given community. I think it is going to be a very difficult period of adjustment and I think there is going to be a lot of stumbling on the part of a lot of cities and a lot of mayors and a lot of city councils until they learn how to utilize these funds. It is going to be a totally different way of administration. But I think it is inevitable and I think it is a worthwhile change.

MR. KIMBALL: Thank you.

MR. BARNES: Well, thank you very much for being with us this morning and for your very excellent presentation.

(Off the record.)

MR. BARNES: Our final speaker this morning is a professor of law at the Washington University School of Law, a man who has done a great deal of thinking and writing about the urban planning process problems and is the author of one of the leading text books in this field. It is Dr. Daniel Mandelker.

Pleased to have you with us this morning.

DANIEL MANDELKER
PROFESSOR OF LAW
WASHINGTON UNIVERSITY
ST. LOUIS, MISSOURI

MR. MANDELKER: Thank you very much.

I have for my topic this morning the Impact of Air Pollution Control on Minority Groups and I want to begin by pointing out what I think is obvious to most of us, that we really do not have an awful lot of information and research available which can tell us definitively just what the relationship is or will be between the enforcement of air quality standards and the welfare of minority groups of all kinds in our urban communities. I have had the opportunity to review one or two preliminary studies which do give us some leads, so that it seemed to me this morning that it would probably be best if I would very briefly outline for the Board some of the problems and factors which I see as affecting this issue in the long run and which may give us some guidance on the issue of what the relationship between implementation of air standards and the minority welfare will be.

I think that when we state, first of all, the issue in terms of impact on minorities, perhaps we ought to be clear

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just exactly what we mean by the phrase "impact on minorities." First of all I think that we could, of course, look at the issue in a fairly narrow scope. It is clear, it seems to me, anyway, that as we increase the controls which we exercise over our environment, as we both increase and strengthen them, that we are to some extent going to limit choice, choice among all groups of the population, especially with reference to their job patterns and to their housing opportunities. And one effect, therefore, of an attempt to strengthen controls over the environment, including air quality controls, I think will be to increase the outward pressures on land crisis which we see everywhere.

There was reference this morning to the new environmental standards that HUD has adopted. The effect of these standards is going to be to push all new subsidized housing which is built, if we do indeed build any more, away from areas of environmental sensitivity. Very often these areas of environmental sensitivity are low cost construction areas for that reason. The famed Forest Hills site in New York is, in fact, under the flyover path from Laguardia Airport, that public housing project, and it would now be turned down and denied under the new standards developed by HUD in its environmental rating criteria.

So with reference to this somewhat narrower issue, which I want to mention briefly and then go on to some of the larger questions, it does seem clear to me that all of our environmental programs are going to limit choice, both housing choice and job choice in urban areas, and that this limitation is going to have an inflationary push generally on land prices. I think this probably, this point of contact between environmental programs and other programs such as housing subsidy and housing programs, is one point which there may be a collision or an interaction or a disagreement over implementation of strategies and it needs further thought. I frankly see no particular way out of the dilemma except to recognize the need to enforce environmental standards, but then to turn around and recognize as well the need, at least in the housing area, to subsidize those additional costs when they have to be pushed onto members of the community such as minority groups who cannot afford them.

Now, I do want to talk next at a little bit greater length about what I see as some of the larger issues arising out of the implementation of air quality and other pollution standards as they affect minorities, and here again when we talk about impact on minorities my reference here is specifically to minority housing and job opportunities in urban areas, to what extent, so far as we can tell, will the implementation of air quality standards affect these minority housing and job opportunities. And on this point I want to go through, as I said, a series of issues which seem to me to be presented and which may affect this problem.

First of all, I think we make an assumption here when we discuss this issue which may or may not be justified. That assumption is that there is an equivalence between the position of minority groups in our communities and the position of low-income groups in our communities. To some extent much of what I have to say and of what others have to say on this problem applies as well to any low-income group in our communities to the extent that those low-income groups have their choices restricted. I think it is true that census figures still indicate that among minority groups of all kinds there is not as much income variance as there is among non-minority groups, meaning generally that minority groups earn less on the average than do non-minority groups in this country. So that the problems of air pollution and environmental degradation as they apply to low-income groups generally apply even more to the minority population. But I do think that we have to be sensitive to the fact that much of what we say about minorities in urban areas applies to any low-income groups in the urban population.

Secondly, another point which I think needs to be made is that at least as far as housing is concerned that the relationship between air quality standards and implementation, the relationship between the health impacts of dirty air and minority groups, depends to a great extent on the relationship between minority group housing patterns and the incidence of air pollution in our communities. And I repeat that the big point to investigate here and to think about is the relationship between where minority groups happen to live and the incidence or the distribution of air pollution.

Now, generally speaking, since minority groups have their housing choices restricted for them, and I think this is still correct in spite of all the initiatives we have taken in equal opportunity laws and elsewhere, that, therefore, since minority groups have their housing opportunities restricted for them that to that extent they, unlike other members of the population, are not able to select areas of the urban community which are freer of air pollution than other areas may be. It is also true that minority groups tend to live in denser areas in the inner city and it does seem to be true in some studies I have seen that there is more pollution in inner city areas than elsewhere.

My guess would be nationwide that if we could carry out studies in all metropolitan areas that we would find to some extent that the relationship between minority housing patterns and the distribution of air pollution does seem to be largely accidental. That is to say, I could not imagine from what I know of the way in which minority concentrations of housing are distributed in many urban areas--and it varies tremendously. The rather concentrated ghetto, if I can use that word, of St. Louis is not necessarily typical of the rest of the country. In New York City, for example, areas of minority population are distributed throughout the city at several different points in the burrough.

So I would expect, therefore, that the relationship between air pollution incidence in minority housing would tend to be accidental in most cities. To the extent, of course, that the implementation of air pollution controls reduces, therefore, the level of air pollution everywhere, the minority groups will benefit that much more to the extent that they are presently living in areas in which there is greater and not less air pollution.

Now, the third factor that I want to talk about and that is important here relates to the way in which metropolitan areas seem to be growing. Now, here the evidence seems to be fairly conclusive that there has been a spreading out of population in metropolitan areas together with some increase in population densities throughout metropolitan areas, but nevertheless a fairly substantial decrease in densities in the inner cities accompanied with an increase in densities on the outer areas. In other words, what has happened is that the density profile of urban areas, which used to look like a mountain peak, high at the center and low on the outside, is flattening out. It now looks more like an ordinary plateau.

Now, moreover, most planning that is being carried out in metropolitan communities, in metropolitan areas, does seem to indicate a preference for greater distribution of population throughout metropolitan areas and not less. That is to say, I would expect that we would find in areas such as the St. Louis metropolitan area in 10 or 20 years the growth of more and more subcenters of population further and further away from existing concentrations. Federal priorities and State priorities, moreover, insofar as they relate to the racial problem, favor racial dispersal and not racial concentration at any one point in the metropolitan community.

Now, there have been some studies as well which have attempted to relate patterns of metropolitan dispersal to the most optimum kind of metropolitan development pattern in connection with the air pollution problem. These studies are also inconclusive at this point, but to the extent that greater dispersal of population and lower densities improve air quality both generally throughout metropolitan regions, which appears to be true, and generally within those areas of the metropolitan community furthest from the denser air centers, I think we would probably find that minority groups would or would not benefit from this improvement, depending upon the extent to which they are permitted to and do wish to disperse outward in metropolitan areas along with other population groups.

So the other point to make here, I think, is that with reference to developing patterns of development in metropolitan areas, the dispersal pattern which is beginning to dominate everywhere would, I think, tend to lead to air quality improvements, but that minority groups may or may not benefit depending upon the extent to which they are able to disperse along with other population groups in our communities.

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I might add that, of course, subway systems and transit systems which we were talking about this morning tend to reinforce the pole of inner city areas and tend to reinforce growth in the heart rather than on the periphery of urban regions. To the extent that this occurs, these trends may be reversed and the consequences somewhat different.

Now, finally I want to say something about the impact, the legal impact of air pollution legislation, both the Federal and the State, on minority housing and employment opportunities, and what impacts we can expect that legislation to have as it appears to be implemented.

First of all I think we should be clear that the legal mandate in the Federal Clean Air Act amendments of 1970 is absolute. That is, we must by 1975 meet primary air quality standards and we must meet secondary air quality standards within a reasonable period of time. If it is the truth that the Congress intends that the air quality mandate be met absolutely and that other factors and considerations be to some extent not considered when we proceed to meet air quality standards, we will have some very important questions to face indeed. And here it seems to me I want to shift a little bit and talk about employment opportunities as they relate to minority groups and as they may be affected by the implementation of the Air Quality Act.

First of all, and I am speaking here about direct controls on air pollution sources, on employment sources and industrial sources as they may affect the development of employment opportunities for minorities. I guess in general here my point is that to the extent that minority job opportunities are located in central cities and to the extent that the application of air quality standards make it more difficult for the older kinds of industries in central cities to continue, that to that extent we are going to find a shift in employment opportunities for minority groups as well as a shift in housing to the suburban areas, we are simply confirming and ratifying the change in the employment opportunities which has already occurred. St. Louis is one of the classic cases where there has been a substantial outward shift in jobs.

So my point is that depending upon how the Air Quality Act is implemented, the job opportunity issue can change substantially.

The first point to make here is that there is a relationship under air quality legislation between direct controls over pollution sources and more indirect controls, such as land use and transportation strategies, which may to some extent make these more direct controls unnecessary or not as necessary as they may otherwise be. In other words, air quality standards are set with relation to the presence of all air pollutants in the air. It is not necessary to proceed particularly by way of any one enforcement control technique.

For example, if it were possible through modifying land use patterns to modifying transportation systems to reduce the amount of pollution in the air that way, we would, then, to some extent not be required to proceed to direct enforcement techniques which would be applied against industrial sources. In other words, there is a balance here. As a matter of fact, even in the application of direct control techniques there is a balance between what kinds of controls are applied to existing industry and what kinds of controls would be applied to new industry wishing to locate in a metropolitan area.

Let's take the situation, for example, of a new but very dirty industry which wanted to locate in the St. Louis metropolitan area. We would hope that it wouldn't have to locate here. We would hope we would find clean industries, but some industries still have relatively dirty industrial processes but they do generate job opportunities.

The minority community in St. Louis could very well take the position with reference to this particular industrial opportunity that it should be allowed on the grounds that other strategies are available in the air pollution kit which could be applied and which could reduce air pollution levels to the point that this new, though dirty, industry, somewhat dirty industry, could locate in the St. Louis area.

I might point out, by the way, that to the extent, for example, that we proceed with gasoline rationing, with bans on parking, with bans on filling stations, with attempts to change the transportation mode in urban areas, that to some extent--to the extent that we proceed that way we shift the costs, if there be costs, of pollution control on non-minority groups and not on minority groups, because since minority groups do not depend as much on the automobile for transportation, an air pollution strategy which would attempt to change transportation modes rather than industrial technology would, I think, shift some of the costs from minority groups in the community to non-minority groups.

Now, these issues, I think, are very important. As I said, the air pollution statute, the Clean Air Act, provides for meeting air quality standards absolutely, but air quality standards are not defined with reference to any particular pollution source. Therefore, the kinds of strategies we adopt in implementing air quality standards will have different effects depending upon whether or not they are applied to different kinds of pollution sources.

For example, take the air travel situation. If we found that locating the airport further away from the metropolitan center as we now have it would reduce air pollution levels, since non-minority groups fly more than minority groups, we would find that the extra cost of transportation to this relocated airport would improve pollution but would make it cost more for non-minority groups to travel, but may make it possible, at least hopefully, to defer air pollution control enforcement against dirtier industries but which nevertheless may be in the inner city and provide employment opportunities to minorities.

Well, in conclusion, what I have tried to suggest here briefly is that the effect of air pollution controls on minority groups is presently indeterminate. I think these effects will depend on a variety of factors, on the types of controls utilized, on the extent to which legal powers are effectively used, on the kinds of metropolitan patterns we develop, that there are some issues of not particularly conflict but of contact between air pollution objectives and other social objectives which we are attempting to pursue in our communities, that our options, I believe, are still open, but that the way in which we utilize these options need careful consideration if we are not to damage the position of minority groups in our communities unnecessarily.

Thank you.

MR. BARNES: Well, thank you very much. I think you addressed very much head on a number of the things that the Board had looked forward to exploring here in St. Louis and I think at this point we may have some questions for you.

Mr. Kimball.

MR. KIMBALL: What is the basis for your conclusion that air pollution is greater around minority groups where they live or where they are housed? Do you have specific references or citing that led you to that conclusion?

MR. MANDELKER: Well, what I said, perhaps I should have been more specific, I said that so far as I could tell, if one looks at the ghetto pattern, the pattern of minority group housing concentration in cities, it differs substantially from one city to the next. So that I would expect that the relationship between air pollution and minority group, you know, residential concentrations is accidental.

There have been a few studies which suggest that with reference to the income problem that since low-income communities are denser, tend to be denser and more centrally located than higher- and middle-income communities, that for that reason there seems to be a greater concentration of certain pollutants in the air of low-income residential concentrations in metropolitan areas. But these studies apply to one or two metropolitan regions and they may not be typical of all metropolitan regions.

MR. KIMBALL: Could I ask one other question?

The entire pollution abatement program, at least as I understand it, and maybe someone can correct me if this is wrong, is based upon the concept that the best practical technology be applied to new industry and then if that is insufficient the best available technology reagrdless of where it is located in order to avoid the very problems that you have brought up. I think it is inconsistent to penalize any section of our country, whether it be the inner city versus the suburbs or one State versus another or one city versus another, competing for industry and jobs. And this has been my understanding of the concept of our entire pollution abatement programs is that we apply that in that manner in order to avoid what you say might happen.

Now, if that is incorrect, perhaps somebody from EPA or the government agencies could correct me.

MR. BARNES: You are substantially correct.

MR. KIMBALL: So that would negate your fear about the job opportunity question?

MR. MANDELKER: Well, let me point out that I don't know if this is--I have not been in the discussion here, but I was looking at this as an academic and outside the administration program, and I do see some confidence. Now, the least there is the issue of nondegradation, so called, which is presently before the United States Supreme Court. If the United States Supreme Court should decide that the Clean Air Act of 1970 means that in areas where the air presently meets air quality standards it may not be degraded, that ruling may very well have the effect of limiting the entrance of new industry into those areas if that new industry will have the effect of degrading air quality.

In addition there are, I think, other and more subtle issues and they relate to the balance of enforcement between existing industry and new industry. As we know, there are provisions in the Federal law which provide for the States to have a control over the location of any new pollution sources if the location of those new pollution sources will force the area to go over the Federal Air Quality Standards. There is, I think, a tradeoff here between existing industry and new industry.

The tradeoff comes at the point to which existing industry is going to be required to improve its technology to reduce air pollution so that newer industries which may worsen air pollution can enter. And it is my understanding that there is enough discretion in the enforcement of the best available technology rule for there to be some discretion to be exercised here with reference to that particular tradeoff.

Now, if I am incorrect, Mr. Svore, you can--

MR. SVORE: I think you are basically correct.

MR. MANDELKER: Yes. There is some discretion and that issue is going to have to be raised. It surfaced in Montana, as we know.

MR. KIMBALL: It would seem to me that even if that discretion were to be exercised it could be exercised to benefit the minority groups as well as not to benefit them.

MR. MANDELKER: I did not indicate that the discretion would necessarily be exercised one way or the other. It did seem to me important to point out to the Board that the discretion was there.

MR. BARNES: Mr. Kovago, you have a question?

MR. KOVAGO: Professor Mandelker, you mentioned this socioeconomic impact which you analyzed there are so many unknown elements, so probably you cannot answer my question, which is very simply:

Do you think that taking into consideration all elements which we can foresee right now that implementation of air quality standards will bring people more together in our cities in the future, will it create a more friendly atmosphere where people would better understand each other? Or do you think that certain antagonisms, certain unfriendly feelings would be increased?

MR. MANDELKER: Well, that is difficult to answer. I think one point to bring up here is that most of the air pollution strategists to whom I have spoken tend to favor urban and metropolitan development patterns which call for less density rather than more and more dispersal rather than less, and to the extent that that happens I think that the effect of the abdication of the Air Quality Act will be to have people be further apart and not as concentrated as they were before. You see, that is an issue which I think is definitely certain.

Some urban planners, along the lines that you are suggesting, I think, would prefer to see a revival of the inner city area, a bigger role for it. Transit systems like Washington should certainly reinforce the importance of downtown Washington. But there are many air pollution strategists who are thinking not in terms of greater densities but in terms of more dispersal and lower densities for what appear to me to be very sound reasons bearing on air pollution. That is an issue which bears on your question and that is an issue which I think we have to think about and try to resolve.

MR. BARNES: Dr. Donaldson.

DR. DONALDSON: Following up on Joseph's question, you studied this, I presume, for the St. Louis area and urban areas in general. Is it your feeling that the vigorous prosecution and implementation of the Clean Air Act and of the strategies that are being developed, do you feel in general that they are good or bad? May we have your professional judgment on that? That is the kind of thing we are worrying with. We would like to have your opinion.

You have given us a very good description of on the one hand this and on the other hand that. Where is your professional judgment? Can you give us your feeling?

MR. MANDELKER: Well, that puts me on the spot.

DR. DONALDSON: It was intended to. (Laughter.)

MR. MANDELKER: The words good or bad I find difficult to respond to that characterization of the program. I do feel that the air quality act was long overdue and I do feel the program generally had beneficial results.

I will point this out and this is the major point. What I feel is a problem, if I can avoid the words good or bad, is the absolute character, the absolute mandate which is presently found in the Federal Clean Air Act of 1970 because it says we must meet these air quality standards. That is a national priority.

Now, I hope we are serious about that priority and I hope that several things will occur, one of which is that this economy will realize that we have too long deferred the cost of not meeting these air quality standards and that we will have to accept now the cost to industry and to the rest of us, whether it be through different kinds of automobile transportation or smaller automobiles, which has been recommended, or a variety of other things. That I think is the problem. We have the mandate. The question is, are we willing to accept the costs which this mandate imposes on us?

Now, I suspect--you see, incidentally, after all, there are other deferred costs in this society which we have not yet been willing to meet, including, I might add, the substantial deferred cost of housing under maintenance which bears, I think, pretty directly on the air quality issue. You know, we have not met the bill on housing maintenance in this country for the last 50 years so that now we face an almost insoluble problem.

But in air quality, I suppose in air quality implementation we are going to find that there will be points where we are going to have to modify techniques, deal a little bit more directly with some of these discretionary issues, and come up perhaps with some changes in the way in which we both draw legislation and administer that legislation. The concern to me is that once the cost of what I see to be an absolute mandate becomes more and more apparent that we will shy away from that particular issue, and it is that issue, incidentally, to which I think this Board could profitably begin to address itself during its deliberations, because I think the public is going to need some salesmanship on it.

The suggestion has been made with reference to automobiles that smaller automobiles consume less gasoline and put out fewer pollutants. Now, I don't know how to respond to this. It seems to me that if we end up with more small automobiles in this country, I don't suppose that we would all have our personal welfare reduced that much. I suppose we would disturb to some extent, you know, the production of steel, the production of cars, the kind of effect the automobile has on the Gross National Product, I simply don't know, but I am simply pointing out that even this kind of suggestion, which probably could be fitted into the economic structure but somewhat restricts our choice in this matter, was met, I think, with quite a bit of opposition.

I tend to believe, incidentally, on this issue that many of the decisions that have to be made are really kind of simple propositions and are basically political. This is one of them, gas rationing is another, restriction of traffic in downtown areas is another, and I think it is basically these kind of political but to me fundamentally important issues which are going to be the important ones and this Board, I think, is going to have to address if it is going to meet that question that you propose to meet.

DR. DONALDSON: We all on this Board, I believe, recognize that cost, and I think every one of us here sitting at the table is prepared to pay this cost. The question really is--and you are here to illuminate these matters for us, and as Ms. Brown has so properly pointed out there is not a great deal of color on this Board--if we adopt this strategy, is it your professional opinion that the minority groups would bear an unfair part of this cost?

MR. MANDELKER: Yes. As I said earlier, I think this is a question which needs a good bit more research and investigation. I can see some areas of inquiry. I pointed out some of them, you know, the enforcement by way of changing transportation modes versus enforcement on technology, the relationship between living patterns and air pollution, the kinds of urban planning we are going to do, the kinds of metropolitan growth we are going to have, but nobody at this point, so far as I can determine, can yet give you an answer to that question of unfair burden on minority groups. I think it is an issue and I take the traditional academic stance and call for more research on that question.

DR. DONALDSON: Thank you very much, sir.

MR. BARNES: Mr. Crawford.

MR. CRAWFORD: I am still not quite sure I followed you and I think it is kind of an important question and a fundamental one, and that is whether you feel it is more important to stay with the mandate of the Clean Air Act of 1970, should that be regarded as sacrosanct, or are there occasions, situations, where the law should be modified somewhat, the implementation should be bent somewhat in order to accomplish other objectives such as employment, the ability to travel from place to place in Los Angeles, for example?

MR. MANDELKER: Well, during the past year I have been working with the Rutgers University planning department on a program with the EPA in which we have been investigating the extent to which land use controls can be utilized to achieve air quality standards. Our preliminary research indicates that--on this particular issue, to respond to that question. The Congress, as you know, inserted in the statute a provision that land use controls could be utilized to achieve air quality. It is our preliminary judgment, if I can just speak informally and off the cuff about this to the Board and to this group, that on this issue perhaps more thought can be given to possible strategies. It is a big, big, you know, kind of problem, what do you mean by land use controls, whose land use controls and at what level of growth, and so on. So that is one area where we have identified some possibilities, I think, for additional thinking about how land use controls could be utilized to achieve air quality objectives.

I would also think that with reference to the National Land Use Policy bill which is presently before the Congress, to which Mr. Sharrott referred, that there has been difficulty at the Congressional level in straightening out the relationship between the State land use program to be required by that bill and the States' obligations with reference to achieving the air quality standards. That is another point I think to which some additional thought needs to be given.

I don't have any specific recommendations on the enforcement of air quality standards by way of improvements in technology. That is not particularly my area of concern. But I do think that this other issue that I mentioned, the nondegradation issue, this question of tradeoff between--you know, to what extent you enforce the standards against existing industry, to what extent against new industry, to what extent you require relocation industry, some of these issues as well may need to be given some additional consideration.

MR. BARNES: Mr. Sullivan.

MR. SULLIVAN: Professor Mandelker, in your remarks you referred to a trend towards population dispersal from the central city. Do you envision a tendency in that dispersal pattern to establish satellite communities away from the central city and thus creating the possibility of a duplication on a probably minor scale of the problems of the inner city?

MR. MANDELKER: Well, there has been some of that, in particular around some of the larger California cities, the Irving New Town near Los Angeles is clearly an example of that kind. Secondary business centers like the Clayton business center here, the Roslyn business center adjacent to Washington, D. C., are other examples.

My own personal feeling is that without a greater control over land uses that the dispersed residential developments which we are beginning to get in this country will tend to be rather formless, that is to say they will not be the clear demarcation between the end, say, of the big inner city on the one hand and the new town or the satellite community on the other which you have in European countries where there are more stringent controls over land use.

Now, of course, it is possible, some of us think, that in planning entire new towns from the beginning to so plan them that we can eliminate some or all of the air pollution which might otherwise be generated by these communities.

But again every time you begin thinking about more advanced and more stringent planning,even in connection with new satellite communities, you talk about more control, not less control, more coordination, not less coordination, and so on, and these are hard choices to be made, I think.

MR. SULLIVAN: Thank you.

MR. BARNES: Mr. Prince?

MR. PRINCE: No, my question was answered quite a while ago.

MR. BARNES: Mr. Lohse.

MR. LOHSE: I have a preliminary question and then a main question, Professor.

First I missed, I am sorry to say, your definition of minority groups for the purpose of your paper here today. Would you clarify that, please?

MR. MANDELKER: I did not define minority groups. I suppose by a minority group I would mean I would refer to the black, Puerto Rican, and Spanish-speaking minorities that live in our urban communities. I could quite easily, I think, expand that to include any--almost all of us are referring as well to minority ethnic groups which in many cities also tend to be very, very concentrated in their living patterns and which also tend to live close in toward the urban center. My own city of Milwaukee, where I grew up, is an example. They are a very ethnically delineated city with concentrations of white ethnic minorities very close to the city's center.

MR. LOHSE: Well, that is still the same question. Since you are addressing yourself to the inner city, the inner urban city problems, you would include the whites who live in this same inner core, would you not?

MR. MANDELKER: I did not, but as I said I think you could expand my definition to include white ethnic minorities living in the city core, certainly. And I would suspect that they would show some of the same income variance that the other minority groups show with reference to having generally a somewhat lower average family annual income than other groups do.

MR. LOHSE: Well, I fail to see why you persist in putting the word "ethnic" in there, but that is beside the point for my question.

MR. MANDELKER: Yes. Well, I am just trying to talk straight, which doesn't always happen. I think it is true that the white groups which tend to be residentially concentrated tend generally to have certain common ethnic characteristics, which is why they concentrate residentially.

MR. LOHSE: All right, I accept that.

Now let me get on with the question, and it is quite philosophical, but I am going to avail myself of the opportunity to address a scholar. So let's talk a little bit about the philosophy of the thing.

Early in your address you established a most interesting cause and effect linkage when you went from the implication--or the imposition of environmental controls, then to resulting limitations on jobs and housing, then to a resulting inflation of land prices, and then to a resulting possible increase in subsidies for the minority groups to offset the chain which had just descended upon it. Having established that and saying that that is a possible inevitable cause and effect someplace, let me ask you if you would propose, if you were managing the country's problems, to utilize that and preplan for it ahead of time in order to solve some of the environmental problems? For example, later you said, the dispersal pattern of population groups improves air quality but minority groups may or may not be able to disperse.

So would you personally, now, as a scholar who has looked at this thing, propose that Federal subsidy be directed to the dispersal of minority groups from the inner core in order to improve environmental quality as well as economic levels?

And then the same question, you referred to the shift of employment opportunities outward. Now, would you propose Federal subsidy to assist in this outward shift of employment as a method of combating the problem?

MR. MANDELKER: Well, first I think I should identify myself as recently and still presently a legal consultant to the State of Hawaii in the development of their land use control legislation and programs and there, of course, we have had to face that issue very directly, particularly because of the strings that are put on us by our island configuration. So I have had to face that very issue which you have mentioned.

Now, that is a pretty tall order. My own feeling is that we pursue in this country different inconsistent strategies all at the same time. That has been clear to many of us for quite a period, that is to say we have used billions of dollars of Federal money to renew our central cities while at the same time we have used billions of Federal dollars to build high speed expressways which permit people to live outside and away from the central cities which we have previously renewed with other Federal funds.

In Hawaii we took the position as a matter of policy that regardless--of course we did not have an air pollution problem there, at least in Oahu, we do on the Kona Coast--we took the position there that balancing off the costs and benefits of different strategies that we might adopt that we felt that a policy of concentration rather than dispersal was generally to be preferred in the Hawaiian Islands, at least then with reference to Honolulu.

It seems to me that on the mainland it is not going to be quite as simple to make those judgments--I might add that while the administration may have adopted these policies, it is not clear that the Hawaii Legislature has. I think in this country it is perhaps not realistic to believe that we can with our political system develop a set of totally eternally consistent development strategies. I think we will continue to be inconsistent and I think this is desirable. I think it is probably the price of the kind of democracy we have.

So in answer to that question, I would think that we are going to simply have to look at programs one at a time and make choices within those programs which seem to be the best possible choices we can make considering all of the different components of our population which are affected.

I personally, if I were asked, do not believe that we can long continue to afford the trend toward greater dispersal of lower density which I described. It is inconsistent with developing greater transportation networks, I believe, and I believe it is inconsistent with developing any kind of metropolitan view which minority and other low-income groups, ethnic or not, can long survive. I believe, as has been pointed out, it leads ultimately to an almost total segregation of population by income and race in the long run and I don't believe we should or could tolerate that kind of approach to the solution of the metropolitan problems.

But I believe at the same time that the tendencies toward a greater dispersal of lower density are very, very great and will be very difficult in the long run to counter.

Whether or not and to what extent meeting air quality standards depends on one kind of population distribution pattern over another, however, has not yet been proved. Hopefully the air pollution study being carried out here which will develop a better mathematical dispersion model, it is hoped, of air pollution will give us a lead on that particular question.

MR. BARNES: Well, thank you very much for being with us this morning and for your thoughtful statement. I think it was obvious that you had triggered a number of things in the Board members' minds that they will be wanting to think about later. So we really appreciate your being with us this morning.

At this point we will break for lunch. The public hearing will reconvene at 2 o'clock this afternoon and we will be hearing speakers from both the Missouri State air people and the Commissioner of Air Pollution Control for St. Louis as well as a representative from industry, from a conservation group, and finally Mr. Carol Thomas from EPA.

We stand adjourned until 2 p.m.

(Whereupon, at 12 noon a recess was taken until 2 p.m.)

AFTERNOON SESSION

THURSDAY, MARCH 29, 1973

2 o'clock

MR. BARNES: At this point I would like to reconvene the public hearing portion of the President's Air Quality Advisory Board meeting.

The first speaker before the Board this afternoon is Mr. Ben Senturia, Jr., who is representing the Coalition for the Environment in St. Louis and who will give us a citizen environmental group perspective on the problems we have been discussing.

Mr. Senturia.

BEN SENTURIA, JR.
EXECUTIVE VICE PRESIDENT
ST. LOUIS COALITION FOR THE ENVIRONMENT

MR. SENTURIA: Thank you. Thank you for the invitation to appear here.

My name is Ben Senturia and I am Executive Vice President of the St. Louis Coalition for the Environment.

The Coalition is the environmental action organization in this region. We currently have 500 individual members and 30 affiliated organizations representing a total membership of about 25,000 people. Our goal is to assure

St. Louis citizens that every effort is being made to protect and improve the environment in this area. To that end I am here representing the Coalition and the environmentally concerned citizens of St. Louis who make up our membership.

It is very difficult for us to try and evaluate the state of our air pollution problem here. On one hand there seems to have been some reduction in pollutant concentrations, while on the other hand current levels are well above ambient air quality standards set by the State of Missouri. Below is listed the percent of monitoring stations which have reported average annual concentrations exceeding the standard for suspended particulates and sulfation.

The data shows that in the city out of 47 monitoring stations monitoring for sulfation 100 percent of them exceed the standards, in the county 100 percent exceed the standards.

For suspended particulates, of 9 monitoring stations in the city 8 exceed the standard and in the county 7 exceed the standard.

Yesterday the Missouri Air Conservation Commission granted a variance to our electric utility's largest powerplant, the Labadie plant, which is located on the periphery of the St. Louis area. When completely on line, we have been told that this plant will be burning about 6 million tons per year of 3.3 percent sulfur coal. Estimates are that it may emit as much as 1,000 tons of sulfur dioxide.

Construction has just begun on yet another Union Electric plant at Rush Island. It will be a 1,200 megawatt plant, and although the coal's sulfur content will be lower it will have no sulfur removal equipment and thus will add to the total burden of SO_2 in the St. Louis area.

Another major source in our city is, of course, the automobile. Car registration in our State has been rising about 4 percent per year. The prospects for a significant reduction in automobile emissions by 1975 still are unclear. As the amount of pollution coming from each automobile decreases, the effect will be somewhat offset by the increased number of vehicles on the road.

Well, that is sort of a very brief touching on the surface, but in the face of these prospects we can't escape the conclusion that although some progress has been attained through substantial effort from our local, State, and Federal officials, we have yet a long journey with the major air pollution sources still very much on the rise.

I, therefore, would like to turn your attention to what I believe is one of the key obstacles in making real progress. Most public officials will testify that the success of important programs is dependent upon the support of an aroused informed public. I would maintain that the same premise holds true in the environmental planning and enforcement process. When government and citizen work together problems are solved. There are three good reasons for this:

1) An aroused citizenry assures a fair public treatment of the facts and allows officials to resist private pressure from the polluter or the environmentalists;

2) In our democratic framework it is the citizen, hopefully armed with facts and understanding, who must ultimately elect the policy makers; and

3) Technicians and professionals can provide numbers and specifications but only the community can establish those non-quantifiable priorities and goals by which the technicians must be guided.

It is this necessary cooperation at the enforcement and planning stages which has been absent on the environmental scene in St. Louis and I suspect many other cities.

Despite well intended, hard-working officials, the air pollution control programs in this area exist in the shadows. They are shielded from public scrutiny. Our city air pollution advisory committee was formed in 1967 and I don't believe it has met since then. The city air pollution appeals board lay dormant with only one of three positions filled. Recently, the board has been filled out and now meets periodically. We understand that many city cases of noncompliance with air pollution regulations never even reach this appeals board. Rather, an informal agreement is reached between the city air pollution office and the polluter. If this is true, it completely circumvents the established public appeals procedure. The county air pollution appeals board does meet monthly and does maintain a list of those companies not in compliance with the regulations. It has, however, seemed reluctant to crack down on cases of noncompliance which linger on the books.

Neither the county nor the city issues any periodic publications for community consumption in terms of air pollution. St. Louis has in the last few years installed a new telemetry system for monitoring air pollutants, which I am sure you gentlemen are aware of. No publication summarizes that information for the community. The county air pollution office issues no annual report with respect to air pollution and the city issues a report which tends to be general, although we are thankful for having some report.

The general attitude seems to be that a heck of a lot more will get done if the public just doesn't bother us. It is this attitude which you and I must be very concerned about.

The impetus for air pollution reports circulated, those which actually do come to light of day in terms of the community, come from citizen groups requesting specific data from air pollution officials or from an occasional summary article appearing in the newspapers. Even these efforts have run into some resistance. Our State statute and city and county ordinances contain provisions which allow industries to declare emission data secret and thus unavailable to the community. The Coalition for the Environment has in fact been denied specific data it has requested.

This means that a company which chooses to use the public air for private gain can then insist that the public does not have the right to know what it is being forced to breathe. We understand and respect the right of a company to protect proprietary information important to its operation. To reveal such information can represent a serious economic loss. However, this loss has to be balanced against the potential health hazard to the community.

In our judgment, the health and welfare of the community must always come before the proprietary rights of private industry.

This tendency to hold the community at arms length is even more blatant in the environmental planning process. Many environmental impact statements are an insult to the intelligence of those of us who are asked to review them. With a few exceptions, impact statements do not incorporate any serious consideration of air pollution or other environmental factors. Let me read you briefly a few sentences from a draft environmental impact statement submitted to our regional Congress of Governments (The East-West Gateway Coordinating Council). It is a draft statement for the extension of a major St. Louis highway, the interbelt. Although a year and a half old, to my mind it is most representative of the quality of statement we are now receiving.

The statement reads in the section, The Probable Impact of the Proposed Project, and the section reads:

> The project corridor traverses urban developments composed of single family dwellings and commercial establishments. The necessary acquisition of right-of-way will alter the

existing environment.

Approximately 194 homes will be affected by the proposed alignment.

This project will have a positive effect on the environment by providing a safe and adequate facility to supplement and relieve present inadequate traffic arteries.

The next section is Adverse Environmental Effects Which Cannot be Avoided:

Necessary acquisition of right-of-way for the roadway construction may have an unavoidable adverse environmental effect.

I point out to you that this is an environmental impact statement which is supposed to exhaustively consider all of the environmental effects of a given project. It doesn't mention air pollution or noise pollution, and I say again that this, although old, is representative of what we deal with.

This apparent failure to take environmental planning seriously stems from many sources, including an unwillingness to include community concerns in the planning process. Cooperation between the planner and the public sector would assure that environmental factors are included at the outset. The legislative history of the National Environmental Policy Act makes it clear that Congressman Dingell, Senator Jackson, and others recognized this need and were hopeful that impact statements would generate citizen participation in the planning process.

But environmental concerns are still not considered legitimate by many elements. The 1971 annual report of our electric utility, that is the Union Electric, indicates this negative attitude in their section on environment. They say:

> In truth, as the use of electricity has increased, the quality of life and of the environment has improved.
>
> It is disturbing to us that a vocal minority of ecologists and environmentalists seek to brand electric utilities as polluters. The truth, of course, is that electricity is a prime solution to the environmental problem and electric utilities are the instrument and ally of an improved environment.

Electricity, of course, provides us with many benefits, but until Union Electric and other utilities are willing to recognize the costs and risks along with the benefits and work with environmentalists rather than against them, little progress will be made. This attitude that environmentally concerned citizens are obstructionists is largely created by citizens being shut out of the planning process. Citizens are in fact excluded at the point when they could be constructive. When alternatives are considered, when the question of community needs and priorities are raised, the public sector is not present. Instead citizens are asked to quietly accept an established plan to which the company or agency is totally committed. The only available option is to oppose the project.

Currently planning is under way for a nuclear powerplant to provide electricity for St. Louis. We understand that a site has been selected north of the metropolitan area and that decisions on plant design are already being made. Again it looks as though an important project with the most serious environmental considerations is being developed in a vacuum without community contribution, without community participation. In tackling these difficult problems, a continuation of the adversary relationship between the community and the environmental enforcement and planning factions will be destructive to our mutual goal.

I hope that in your future reports and recommendations you will give the most serious attention to the need for citizen participation. Perhaps you can help generate a sensitivity to such participation so that future response to control programs and to environmental impact assessments will insist upon real community input. If you find it useful for your staff to develop liaisons with community groups such as the Coalition for the Environment in accomplishing this end, I'm sure our board will be more than willing to cooperate.

Thank you very much and I will answer any questions you may have. (Applause.)

MR. BARNES: Thank you very much, Mr. Senturia.

Are there any questions?

DR. BECKMAN: Mr. Chairman.

MR. BARNES: Yes, Dr. Beckman.

DR. BECKMAN: I am amazed at the statement that appeared on page 3 here that the "city pollution advisory committee was formed in 1967 and I don't believe it has met since then."

I would like to ask, what has the Coalition for the Environment done about this situation?

MR. SENTURIA: Well, in terms of asking the city that the board meet, I wasn't even aware that it existed, to be honest with you, and I just discovered that very recently. There has been no presence of it in the newspapers, there has been no discussion of it.

At the point when questions were raised about how many members existed we did try and suggest that the positions be filled and recommended people to be filled on that board and asked that it meet, but this is recently, and as I say, I was amazed recently to find out that it existed.

MR. BARNES: Dr. Lohse.

DR. LOHSE: I am going to ask you two questions, Mr. Senturia.

I have worked closely with other Coalitions for the Environment from other communities, specifically the Houston-Galveston area, I live in Houston, and I admire the leadership and the initiative which you people always exercise, so my questions are specifically to seek information for our own use, at least my input into the Board.

You mentioned two things I want to ask you about. On page 2 in the text of your speech there you refer to the granting of a variance by the Missouri Air Conservation Commission to the electric utility's largest powerplant, and so on, so on. The other day this Board discussed at some length the use of a granting of variances, the use of the variance, what it can accomplish and what perhaps is a violation of the intent, and all these things, you know, I am sure the same things you have considered.

How do you--and I have to ask you as an individual because I know you don't presume to speak for your thousands of members--how do you view a variance?

MR. SENTURIA: Well, I suppose that a variance represents to us the necessity to allow a company to continue to not comply at the point when two things happen: one, technology does not exist to in fact bring that company down to the appropriate standard, and also when it is shown that the health impact is not substantial.

I should add to that that that last comment about no health impact is of concern to me because I think, as perhaps you all would agree, the question of at what point air pollution actually affects health and where the threshold for health effects exists is a very, very difficult subject, and whether in fact the standards that do exist are totally protecting the community healthwise I think is a very difficult question to answer. Bert Carnow, a very well-known air pollution physician, suggests that we may very soon find out that there is no threshold in fact for health effects so that variances may exist despite community health, in the future we may find that.

So I repeat that with some very serious reservations, we view variances as necessary where technology cannot in fact allow a polluter to meet the standards.

DR. LOHSE: Are you saying that although the granting of variances should be scrutinized in each individual case and kept under careful control, that a variance per se is not necessarily a bad thing?

MR. SENTURIA: Well, with respect to the Labadie plant, if that is what you are getting at, my feeling is that if one goes through and effectively balances the costs and benefits of allowing the variance and the cost and benefits of not allowing the variance and you find after weighing those factors, including the health factors, that you must go ahead and grant a variance, I consider that personally a legitimate measure. I am concerned that in an awful lot of cases--I am not sure whether yesterday was an example of this or not because the Executive Secretary did not have the information I asked for with him--I am concerned that a lot of times variances are granted without that kind of balancing of costs.

DR. LOHSE: O. K. You clarified that. Thank you.

Let me ask you the other question very quickly. On page 5 of your text you refer to the tendency to hold the community at arm's length.

MR. SENTURIA: Yes.

DR. LOHSE: And you decry this alleged practice and I join you in this.

But then three lines down you refer to all of us who are asked to review them.

MR. SENTURIA: Correct.

DR. LOHSE: Now, this sort of seems to me to be an inconsistency if they are holding you at arm's length and yet ask you to review the impact statements. Will you clarify that?

MR. SENTURIA: Sure. One of the most effective ways, if I were concerned about citizen input, would be to involve the citizens in review process and ignore them and I would contend to you that in fact this is what goes on in this area and that those people--those environmentalists who were involved in the review process within the A-95 review function of the environmental impact statements are put in a position where they are asked to review statements. They give what I consider from my biased point of view very critical effective review, put in a lot of time, and then those comments are essentially ignored.

So that's their point, it is even more effective than holding citizens at arm's length.

DR. BECKMAN: I have another question.

MR. BARNES: Dr. Beckman.

DR. BECKMAN: You call attention to the fact, and rightly so, that the increase in automobiles may more than offset the improvements that are made in them. Would you favor regulations that would restrict the citizen's right to use his automobile?

MR. SENTURIA: Well, I think what I would favor would be sensible consideration of alternatives, which would reduce the need and the desire to use the automobile.

For example, in the St. Louis area we now have a substantial controversy over the effectiveness and the financing of bistate transit. I would maintain--and the Coalition is getting involved in that because we feel strongly that this represents a fine opportunity for us to make the alternative of the automobile a less desirable one and one that is less often adopted by citizens.

I think you have to make alternatives available and this is what is not happening now.

MR. BARNES: Dr. Donaldson.

DR. DONALDSON: Yes, I would like to follow up on your statements that you feel that the people involved in pollution control in this area are really not being stern enough. I take it that is the essence of your statement?

MR. SENTURIA: No, no, if I can clarify, my statement says that despite the fact that I personally get the best sort of cooperation from the city, county and State officials, I find them to be very sincere, hard working folks, they still, for whatever reasons, be it because of the political restrictions on them or because of the way in which they operate within the system, prefer, apparently--that the system prefers to operate at holding citizens at arm's length, that is what I am saying, that they are operating essentially in a vacuum and they are operating under the assumption that if we are left alone we can do the job and we don't need citizens harassing us.

DR. DONALDSON: Would it be your suggestion--I take it from reading your statement that it is your suggestion that the air quality data that they are measuring here in town or in the community, you feel that should be made available to you?

MR. SENTURIA: I think that two things ought to happen in terms of information. I think that it is the responsibility of the air quality groups not just to have information there in case somebody wants to drop by and look at it. I think it is their responsibility as control organizations to aggressively attempt to educate the public and make them aware, because of the functions of the citizens that I mentioned earlier in terms of voting, that an informed citizen is necessary to this whole process that you and I are concerned about and that that is not happening and that what I would ask them to do is perhaps nothing more than what the State agency is doing, which I have been thoroughly impressed by.

No. 1, they issue a State booklet with the data contained in it. This is the Missouri Air Conservation Commission. That is raw data which is consumable by some people.

Secondly, they issue a newsletter, which is consumed by those who do not want to deal with raw data. And they make that available and they send it out and they let you know that there is information here, you get on the mailing list. I would like to see more of it, but they go out of their way to try to make information available to the citizens. That is what I would like to see happen.

DR. DONALDSON: Thank you.

MR. BARNES: Mr. Kimball.

MR. KIMBALL: I too am concerned about your comments on the general attitude of--I assume you are including local, State as well as EPA officials in this arm's length attitude with the general public?

MR. SENTURIA: My experience is mainly with the local level, that is what I really feel able to comment on. My impression from talking with other people from other cities is they have experienced the same thing.

MR. KIMBALL: I think you ought to be a little more specific in those indictments, because the Federal law specifically requires a considerable amount of public input into the decision making process. This is required under the law. That is one of the reasons the Presidential Advisory Board is here with a public hearing and that you have been invited to testify, is that we do want public input and I think Congress wants public input into the decision making process, and your charges here, I think, are too general. I think you ought to be, in order to be constructive, much more specific about where you think this input should come.

MR. SENTURIA: I would be more than happy to. I thought that I at least had mentioned some areas in terms of the construction of powerplants, the--

MR. KIMBALL: Let me ask you some specific questions, then, with regard to the comments that you made.

MR. SENTURIA: Sure.

MR. KIMBALL: One is that you say here on page 4 that:

> Our State statute and city and county ordinances contain provisions which allow industries to declare emission data secret and thus unavailable to the community.

Now, as I understand it, the monitoring systems that are being undertaken now are conducted by the Environmental Protection Agency in cooperation with the State. Now, is that data made unavailable to you?

MR. SENTURIA: No. What I said was emission data. The monitoring data is perfectly available. The emission data that the individual agencies get from the polluter contrasted with monitoring data of the ambient air quality concentrations. There is an option that a company has according to the State statute and the individual city and county agencies must, I presume, follow that statute in order to get an exemption from the State, that they give the polluter the option of declaring that this is proprietary information which may be declared secret and may not be released to the public, and as I said in here very specifically there is data that we as an organization have asked for and have not been able to get.

MR. KIMBALL: But the general--

MR. BARNES: Excuse me, Tom, just a minute. I think Jerry Svore has a comment.

MR. SVORE: You are aware of the fact, of course, that the data that the State has are available to us? I am with EPA.

MR. SENTURIA: Yes, I know.

MR. SVORE: And that anything that EPA has in this area is available to the public?

MR. SENTURIA: No, I wasn't aware of that. We had asked for information from the city air pollution office and they are constrained because of the State statute and I was not aware that that data is available through you.

MR. SVORE: We recognize that there is that State statute, but that does not prevent them from giving the information to us and anything we have is public.

MR. SENTURIA: So that anything that they have you have and we can get it from you?

MR. SVORE: You certainly can.

MR. SENTURIA: Fine. Thank you.

MR. KIMBALL: Now, one other question. This concerns the impact statements that you have singled out here as one which you feel that the quality of the statement deserves considerable improvement. And I, too, have reviewed these at the Federal level and I found the same thing that you have, that a good many of them are really not sufficient to allow either the public or a policy-making agency to make a clear evaluation as to the impact or the adverse impacts on the environment of a particular project.

But here again the public has--that was the reason that the law was written, so that these 102 statements had to be made and that they were made available for public perusal, was in the hopes that they could be reviewed and the public or anyone else could call attention to the insufficiency of whatever was presented. And to me this would be one of the primary objectives of an organization such as yours, would be to review these.

Now, the problem or the indictment again was one where you say you had done this and evidently you have not received the consideration you feel you should receive when your comments are presented.

I wonder if you could give us a specific example of this in which you have done this, have gone through the procedure and where the consideration was not given?

MR. SENTURIA: O. K., let me see if I can recall, because we seem to do it so frequently.

We review each month, I would guess, 4 or 5 or 6 environmental impact statements, at least, and make substantial comments and I would say--by the way, I am not sure I can come up with a specific name example for you, I can go home and get my stack of impact statements and bring them to you and pull one out and be almost assured that the example would answer your question. But highways are an example, sewage treatment where we are concerned with the receiving stream, the nature of the pollutants put in the receiving stream haven't been taken into account in any way, shape or form, consistently they are not up to snuff, metropolitan sewer district impact statements are not up to snuff, the highway department impact statements oftentimes don't even mention air or noise pollution.

MR. KIMBALL: Well, one of the specific problems--

MR. SENTURIA: Let me give you a specific that just occurred to me, the development of a recreation center in the county which many of us thought was a good idea but in no way, shape or form even mentioned the problems of runoff into a nearby stream, didn't mention any of the potential land problems, didn't mention any of the environmental problems.

And let me emphasize two things with regard to this problem. No. 1, it is not just a matter of making the input and then not having it registered. It is also a fact that if you take a project--let me take as an example this coming nuclear powerplant. If Union Electric goes through this planning process and then comes up with an impact statement in the ninth inning and says, here is our impact statement, would you review it, and we say, you haven't considered the alternatives, you haven't considered these things in terms of environmental impact, they are not about to go back and redesign their project, they aren't going to do it. They may change their impact statement, but what we are doing is simply trying to perfect an impact statement so they can get their permit. We aren't having impact into that project. We aren't having an effect on whether that project in fact is going to be safe or not.

Supposing that we determine that north of the St. Louis area and the Mississippi River, supposing somebody suggests that that environmental alternative may not be the best one. Suppose we make that recommendation to

Union Electric in the ninth inning. It makes no difference.

In other words, what I am saying is, it is nice to involve citizens at the end, but in fact if you are really going to have an input, if citizens are really going to be involved in the community planning and not be planned on, then it can't be this way.

So those are my--

MR. KIMBALL: Well, are you saying that your principal objection is in the environmental impact statements that you reviewed primarily because of the lack of alternatives to whatever project is being proposed to solve the particular problem or is it--

MR. SENTURIA: No--excuse me. No, I wasn't trying to hit at specific areas because I think the impact statements generally have been weak all the way through. Alternatives is one section that there seems to have been difficulty in treating exhaustively and the courts, as I understand it, have said that in fact that is necessary, all reasonable alternatives must be considered, and they aren't being considered.

The second problem that is of difficulty that I see is that if you ask the Missouri Highway Commission to write an environmental impact statement about a given road, you ask them also to list and consider the alternatives exhaustively. That means they should consider the option of mass transit in an urban area, they ought to consider the alternative of not building that road.

How can you ask a man who is in the business of building roads and that is where he gets his money from to consider alternatives that essentially will put him out of work?

How can you ask the Union Electric Company to consider the alternative of changing their rate structure so as to decrease the interest in electricity, how can you ask them to perhaps build a powerplant for someone else or try to discourage the use of electricity when they are in the business of creating electricity?

One of the problems we find is just this, that the source of the impact statements makes it very difficult to get an exhaustive unbiased view and balancing of environmental factors. An impact statement in theory is a presentation of all the data so that a decision maker somewhere along the line can say, hm, based on these facts and based on all the other input that I have we ought to do this, and what I am saying is that given the source of this information it is almost impossible to get an even balanced weighing of those costs and benefits and alternatives.

MR. BARNES: Mr. Evers, you had a question?

MR. EVERS: Yes, I would like to ask a question.

As you know, Mr. Senturia, we are supposed to advise the President as to what course of action we think it is wise for him to take for the country and that involves balancing many factors. And I see that on page 7 in your statement you mentioned that the nuclear powerplant which is proposed has the most serious environmental considerations, and it probably does. On the other hand, you also are complaining, and I don't blame you, about the SO_2 problem with use of coal.

Now, considering the fact that it seems to be technically most difficult to solve the SO_2 problem, that we are importing most of the oil that is being used on the East Coast, and that it appears nuclear power is relatively clean and that there is the possibility of an electric car-- In other words, I am loading your answer, I hope (laughter).

What is your attitude towards pushing a more national effort, a priority effort, to get more nuclear power? You just mentioned maybe Union Electric should change its rate structure to discourage the use of electricity. I suspect what we ought to be doing is trying to get more nuclear power and urging more use of electricity.

MR. SENTURIA: Well, my answer to that is that it seems clear whenever you try and extract energy from a natural resource there are going to be environmental effects and that even if that effect exists in terms of a risk--and the Atomic Energy Commission issued a report which I saw reviewed in a critique in Science Magazine which suggested that they were, for the first time, starting to suggest that there were calculable risks involved with the building of atomic energy powerplants, that is to say in terms of a disaster of some sort or something.

All I am saying is that if you are telling me that you can go ahead and encourage the consumption of electric power without any risks, I am saying that that is a problem and that if we continue to encourage the use of electric power that we are going to start to incur more and more of the risks and costs of electric power. Nuclear energy has its environmental problems.

I would maintain that what we should be doing in terms of this nuclear powerplant is sitting down and saying, what are our alternatives over the next 10, 20, 30 years, what happens if we in fact reduce the interest in electric power, what if we don't advertise on television for more consumption of electric power, what if we do change our rate structure around so that the guy who buys more pays more? Isn't this the kind of alternative that ought to at least be considered?

When is SO_2 abatement equipment going to be ready? I mean that is something that ought to be thrown into this picture.

And lastly and most importantly, the thing that I am getting at is who makes that decision. Do you make that decision, do I make the decision, does Union Electric make the decision? Who decides what risks the community wants to take in terms of nuclear power? The answer is the community should make that decision. Is it? No. The decision is being made by Union Electric in a closed room with no citizen participation and that is my real complaint.

MR. EVERS: I dare say it is hard for the community to say, O. K., a nuclear powerplant is either safe or unsafe. That is a highly technical question.

So really what I'm saying is, assuming that you had assurance, as best that there would ever be--and by the way, I'm from California and we have earthquakes that make this very difficult--but assuming that you can be assured that a nuclear powerplant is safe, what other environmental concerns would you have?

MR. SENTURIA: Well, I am not following you. First of all, I think the assumption just doesn't exist.

MR. EVERS: I agree with you that we should be exploring all the alternatives you are talking about. But the time is getting late and at some point the citizen has to say, with the knowledge I have this is my judgment.

MR. SENTURIA: Right.

MR. EVERS: You can't wait around for years to make these judgments or it is too late, we'll be running out of oil or we'll be having to use lower grade coals, and it seems to me that the time is now, really.

MR. SENTURIA: I couldn't agree with you more, but you are suggesting that it is about time the citizen got involved. What I am saying is it is about time that the polluter and the planner allowed the citizen to get involved.

MR. EVERS: No, I am asking something much more specific. Right now with what you know and the alternatives that you see now, without further exploring them, and assuming that we are going to have more electricity--you may not be willing to make that assumption, but assuming that--what form of generation would you favor?

MR. SENTURIA: I can't answer your question and I can't answer your question because I don't think that, No. 1, all options have been considered. Nuclear power to me represents a potential energy source that ought to be considered, but it ought to be considered along with a number of other things. If you look at the President's budget it is very lopsided towards the research and development of nuclear power. There is a commitment to nuclear power.

I would maintain, if you force me into the position you are of making a choice now and give me no other elbow room, that in fact there has been no consideration of other techniques, be it hydrodynamics, be it solar energy, whatever, and that I am resistant to being forced into nuclear power without any consideration of other options, including the reduction of the use of electric energy.

MR. EVERS: Thank you.

MR. KIMBALL: Could I ask along this same line, would you consider yourself to be competent, even though you had that scientific data available, to make those kind of judgments between the solar and magneto hydrodynamics and fission or fusion?

MR. SENTURIA: No, by no means am I competent to do that. What I do feel is true is that there are individual people in the community who are competent, technicians, who are interested and willing to look at the data, and the whole basis for any sort of scientific interest and scientific research is the notion of a referee press, taking data, taking information, throwing it out into the scientific public and letting them respond to it.

That is not happening here. If information that Union Electric is basing its decisions on is thrown out into the public questions will be raised. The Committee for Environmental Information in St. Louis has a scientific division of technical physicists and other folks who are more than able to make some decisions and make some comments on the safety of nuclear power. They are competent.

So, no, I am not. I depend upon the providing of information and critique from other people who are competent.

MR. BARNES: Professor Holden?

PROF. HOLDEN: Mr. Chairman, I would just say to Mr. Senturia that I have a sneaking feeling that I am probably on his side but he isn't helping very much. And I say that in all candor because I am struck, he just blew half his case when he said he wasn't competent to make judgments. The President and the Congress is also making judgments on the basis of stuff put before them and they have the same order of competence or what-not.

But my real question is on the main thrust of your presentation, which is your concern with what you describe as citizen participation. So let me pursue you with three very specific questions.

No. 1, you refer to specific data that you saw and could not get. For the record, can you identify for us a case involving specific data which you sought and could not get? That is my first question.

MR. SENTURIA: We tried to get emission data from the Monsanto Chemical Company, as I recall, and were not able to get it.

PROF. HOLDEN: As of when?

MR. SENTURIA: Well, actually, I--

PROF. HOLDEN: All right, you don't know.

MR. SENTURIA: I can't document it because--

PROF. HOLDEN: Let me go, then, to my second question, which goes to the discussion of variances.

With or without regard to one's position on variances, how many, under what conditions, and so on, could you simply specify in a minute or two what the Missouri process is for granting variances and the manner in which you conceive that you could not get into that process?

MR. SENTURIA: Well, in terms of variance procedures I think it is--I would have to rely on the Executive Secretary of the State Missouri Conservation Commission to detail it for you. We are unable to get into the procedure. I have no--

PROF. HOLDEN: O. K. So you are merely quarreling with the substance of their decision in that particular case, you think they made the wrong decision?

MR. SENTURIA: The Labadie decision?

PROF. HOLDEN: Yes.

MR. SENTURIA: I am sorry, I was not quarreling with the text. What I was trying to do was simply indicate in the first paragraph or two that in fact what is happening is that air pollution problems in the St. Louis area are substantially getting worse and I was simply trying to point out that we have two powerplants that are developing.

PROF. HOLDEN: All right. Well, you and I read the English language a little different. I read that whole paragraph and I was taking that as quarrel, but that's all right.

MR. SENTURIA: O. K.

PROF. HOLDEN: My third question is along in the same spirit but on a different issue of, I guess, Mr. Evers' question. Considering that part of the responsibility of this Board is to make recommendations both to the Administrator of EPA and under some circumstances to the President, I ask you, since you consider citizen participation to be an important problem, on that premise what are your specific suggestions for recommendations that you think ought to go in that would be appropriate to that end if you believe that a Federal role is appropriate?

MR. SENTURIA: Well, if you are asking me for specific recommendations--

PROF. HOLDEN: I am.

MR. SENTURIA: I am not prepared at this point, but I will be glad to submit them to you.

PROF. HOLDEN: O. K. I won't pursue the point. I would say I express some disappointment considering that you did not come here prepared to submit them considering I got up at 4:30 this morning in Wisconsin to get down to this meeting.

MR. SENTURIA: Well, I got up at 5:30 to write this report.

MR. CRAWFORD: Mr. Chairman.

MR. BARNES: Yes, Mr. Crawford.

MR. CRAWFORD: I am interested in your comment that

Union Electric plans these processes behind closed doors without participation by anybody. Does Union Electric require a zoning permit to build any kind of a powerplant?

MR. SENTURIA: Do they require a zoning permit?

MR. CRAWFORD: Yes.

MR. SENTURIA: I can't tell you because I am not exactly sure where it is going to be and I don't know what the procedures are.

MR. CRAWFORD: But before it is built it requires a zoning permit from somebody, I venture.

MR. SENTURIA: It certainly requires a construction permit, it requires a permit to go ahead, I will take your word for it.

MR. CRAWFORD: The zoning was the first part. Does Union Electric require a certificate from the State Public Service Commission before it builds a plant?

MR. SENTURIA: I can't answer.

MR. CRAWFORD: Of course they do.

Does Union Electric require a permit from the Atomic Energy Commission before they can get a permit?

MR. SENTURIA: Can I respond to your question? The answer is yes, they require those permits and those permits come--and they also require them an environmental impact statement, which is open to public comment, if that be No. 4 on your list. But the fact is that that is down the line, that is after a spot is picked, that is after design specifications have been established. That's going on now.

From what I can tell a commitment has been made. Decisions are being made. Citizens are not being involved. Yes, citizens will be involved in the eighth or ninth inning.

MR. CRAWFORD: Is it your contention, then, that these hearings that you go through at the State and Federal level are just going through the motions because it is too late to change anything?

MR. SENTURIA: In many cases the answer is yes.

MR. CRAWFORD: I couldn't disagree with you more.

MR. LEDERMAN: Excuse me.

MR. SENTURIA: I couldn't agree more. I think that in fact those of us who have been involved in the hearing procedure at all sorts of levels with all sorts of subjects find that many times decisions are in fact made ahead of time and that ears are closed ahead of time.

MR. CRAWFORD: Which nuclear plants have you been involved in at the construction level?

MR. SENTURIA: I have been involved in none.

MR. CRAWFORD: I have been involved in several and I can assure you that many changes are made. Maybe the company, the proprietor, has its ideas, but they are changed because of the things that come out in the hearings.

MR. SENTURIA: I appreciate that. If you can show us that in fact we can be involved in the questions of site selection and the environmental factors involved, I certainly will withdraw my comments. I think you will find that is not the fact.

MR. CRAWFORD: These are open hearings that anybody can come and make a statement.

MR. SENTURIA: May I ask you if you think at that point that they--and I don't mean to get into a dialogue here, but would you suggest that a company is more than willing to change the site that it is committed to at the point of these hearings?

MR. CRAWFORD: If the facts so dictate. It has been done in the past, but it depends on the facts to be decided by an impartial group.

MR. SENTURIA: Well, I would be interested to know where in the past a proposed nuclear powerplant when in the process of hearing has actually changed location.

MR. CRAWFORD: Bodega Bay in California.

MR. LEDERMAN: Oh, no, that was much later.

MR. SENTURIA: O. K., they changed the location or were they stopped? As I understand, I have read, as Mr. Lederman reminds me, of the Bodega Bay reactor, and Dave Pesman's articles written on the Bodega Bay reactor suggest that that was stopped and it wasn't a matter of change of location. It was a matter, again, a ninth inning reaction on behalf of citizens where they went in and they had to oppose the project, that was the only alternative they had.

MR. BARNES: O. K. I think there is some followup on that. We will be taking a break after the third speaker and I think there will be a chance for you to compare notes there.

At this point I think we have had a pretty good interchange here and that probably we had better move along if we are to handle the speakers we have.

But Mr. Senturia, thank you very much for being a witness.

MR. SENTURIA: Thank you. (Applause.)

MR. BARNES: Our next speaker this afternoon comes at things from a different perspective. He is the Executive Secretary of the Missouri Air Conservation Commission and he is Mr. Harvey Shell, who for the past six years has held that position and he will be talking to us about the Missouri air pollution control program, so we may well have some feedback now into some of the other topics we covered just previously.

Mr. Shell.

HARVEY SHELL, EXECUTIVE SECRETARY
MISSOURI AIR CONSERVATION COMMISSION
JEFFERSON CITY, MISSOURI

MR. SHELL: Thank you very much. It is my pleasure to be here.

It was a little difficult in deciding exactly what to say as Mr. Copley will follow my presentation and will talk specifically about St. Louis. So I decided that I had to talk about the Missouri program in general and how it relates to St. Louis and see if we couldn't clarify some things along that line.

First I will talk a little bit about our law. Our law was first adopted back in 1965, it was amended last year. It provided for several things. It provided that there would be a 7-member commission established, there couldn't be more than 4 members from the same political party, the board wouldn't be paid money for their time, they would only work part time, there couldn't be more than 1 member from the same senatorial district. This causes the commission members to be spread out and to not make decisions on a concentrated basis. They come from all parts of the State.

The responsibility of that commission is to control air pollution throughout the State.

The law provides that power shall be delegated to that commission to adopt regulations and to enforce those regulations. I direct an agency which has 24 people. The agency people are merit system. We help the commission on the drafting of regulations and all the other things that go into that as well as enforce the regulations.

Enforcement doesn't come just from the State level. The law also provides that you can have participation by local agencies. We have 5 such agencies in the city of St. Louis and St. Louis County from this area are exempt. We also have agencies in Kansas City, Independence, and Springfield, and those are the major cities in the State of Missouri.

For a city to get an exemption or an authority to carry out a program they first have to adopt an ordinance that is as stringent as the regulations that the State has. Then they have to show the commission that they have the intent and the capability of carrying out a full enforcement program. The State does continue to maintain concurrent jurisdiction within the local areas.

Other things that the State does or is required to do by the new law is that the State is required to look at all variances issued by the local governments, all construction permits, the State will either disapprove or approve any of these things that are forthcoming from the local agencies.

I might say that we have had very good cooperation from all of these agencies. We have not had any big problems. The agencies have generally gone along with the things that we wanted and they have caused air pollution to decrease in all areas.

I saw some drafts the other day from the city of Springfield, Missouri, it was a small agency. They plotted on a curve or they plotted curves for the various years since 1969 of the levels of suspended particulates. These curves are very jagged, bounced all around, but you could start with 1969 and you could look at each of the curves, they were in different colors, and every year the level of suspended particulates had come down. I will talk a little more about that later.

In addition to the exemption the law provides that the State can grant variances. We look at variances as time that is given to a company to give something in return if the company in fact can. If the technology is here. We want a compliance schedule that is reasonable, that is attainable and that will get things cleaned up as quickly as possible and this is assuming that there is not any detrimental health effect present at the time. We want the people who are working for that plant to continue working there, for the control equipment to go on, we want the plant to clean up.

We only grant variances for one year time. The compliance schedule might be for 4 years. We require that the company report its progress to us every 3 months and at the end of the year if they haven't made progress then they don't get another variance, so that is a lever that can be used all the way down the line even though it could take 4 years to get all of the equipment installed.

Here again I might say that to me the important thing in this game that I am in is the fact that we have regulations. It does take time sometimes to get the job done. I am sure it takes longer many times than a lot of people like.

The important thing to me is not so much whether a lime kiln operation that has been there blowing lime dust in the air for 40 years, on whether they are able to stop blowing dust into the air this year or next year or 3 years from now. I know that in the near future by virtue of regulations that we have that they will do the job.

I still like to see it done fast, I am not saying that I don't, but the important thing is the regulation. That is the more important thing than the time that is given provided that the time which is given is reasonable and you try your best to make it so.

Another thing which I think is a very important item in our new law is the fact that anyone who wants to modify a plant or build a new plant must get a construction permit from the commission and we cannot grant one if that new plant will be in violation of either our regulations or will be in violation of the Federal or State standards.

I would say that our construction permit provision does give us some control over degradation. At least we can assure ourselves that the best technology that is available is going to be applied to the new plants.

Finally the new law provides that we can get injunctive relief and monetary penalties up to $5,000 a day. The penalties wouldn't be imposed, though, unless everything else failed. We would try conciliation first. The company would have the right to appeal, have the right to a hearing before the commission, but if these efforts fail and it became apparent that the company was not going to do something at all or the polluter, it wouldn't necessarily have to be a company, at that point the commission could seek an injunction and penalty through the Attorney General.

O. K., those are the provisions of the law.

There are some hidden provisions in that law, which I think a lot of people probably haven't read, but they are apparent if you think about them, and I think that these other things in the law are really the assurances that there will be a good program, an effective program in the State of Missouri.

One of them is the fact that the commission is bipartisan or nearly bipartisan. The makeup is 4-3. They don't get paid anything for their jobs. There is not likely to be any pork barreling involved when the pay is zero.

Decisions have been made in the past and we think they are going to be made in the future on a practical rather than partisan political basis. The name of the game is not really partisan politics but it really is practical politics. Everything has many facets, everything that we face is very complicated and it is very difficult to make these decisions. There is really no place in this for partisan politics. None of the commission members that have been on our board since it started has ever used their membership as a launching pad for higher office. I don't expect that that is going to happen.

The second assurance in our law is that the commission doesn't just adopt regulations, they have an equal responsibility to enforce the regulations. There have been many times when our commission has been under pressure and they possibly could have grandstanded a little bit, they could have come up with a regulation that they couldn't enforce or one that might have been ridiculous, but they always had in the back of their minds that they had to enforce that regulation later. This is a check. It helps keep things honest. They have to live tomorrow with what they do today.

The same thing applies to appeals, any decisions that they make, it is just not on regulations. They still have to live with what they do.

We think that this has kept our board on a pretty even keel. I might say that four of the members of our commission have been on there since the law was passed and the sum total of years of experience of service on this commission totals up to 33 years, so it is not a small number.

We made some progress. We do have regulations now that apply to all parts of the State. There have been a lot of companies that have come into compliance. The regulations that we have are pretty general in nature. This gives us flexibility. I don't believe that you can look at any one situation, any one industry, any one thing as a group and expect things to happen right away. Every case that we face has to be an individual case and has to be looked at on its own merits. And our regulations are general. They allow us the flexibility to look at every situation as that situation exists alone.

We are currently in the process of trying to put together some more regulations which we think we need. We need regulations that would control lead emissions from lead smelters, we are trying to develop those. We think that we need some regulations for controlling nitrogen dioxide from nitric acid. In these cases we are getting a little more specific than we have ever been in the past.

In addition to regulations--and I might say that this doesn't mean that this is all we are thinking about.

I am very sure that my commission will be interested in adopting the new hazardous pollutant standards once EPA has done so. Once the smoke has cleared a little bit on new performance standards I think we will be interested in adopting those. We have regulations applying to the same types of things that apply to new companies that are about as stringent right now as the new source department standards, so there is no great hurry. We will wait until things jell at the Federal level there.

We are looking at specific problems, though, and to illustrate the kind of problems that we bump into and the fact that money is involved in any of these, we have an industry down in the Missouri Ozarks which is a big industry for that area and it is the charcoal industry, the forest product industry. Most of the people down there work in that industry or receive money from that in one way or another.

We took a look at the charcoal kilns. There is something like 350 different locations of charcoal kilns in the Ozarks and most of these are--I really don't know many people who own more than one group of kilns.

In a typical kiln operation, a kiln owner has 12 charcoal kilns. He hires 4 people, pays himself a salary of just under $6,000 a year. Before taxes he nets an additional

$3,000 from his business. The 4 people who work for him make $5,000 a year. There is money that is funneled from his business out to people who cut the wood, and so on. He uses mostly scrub oak and materials like that that have no other use and this, of course, is converted into charcoal.

Lots of smoke comes from the charcoal kilns. We could have written a regulation and we could have said that charcoal kilns are going to have to meet certain restrictions. There is no way to put a $5,000 afterburner on a $3,000 kiln. I suppose that a good **scrubber** would scrub out the smoke, so the technology is here. There is just no way to apply the technology that is here today to his kilns and have the guy stay in business.

So then it becomes a matter of writing a regulation. And if you write that and really enforce it, then he has no choice but to go out of business and when he goes out of business he and the 4 people and others that he supports directly or indirectly go on welfare or they move to St. Louis or they move to Detroit and they add to the other problems that are there.

I come from outstate Missouri from a small town and I recall that when I was a boy in high school, every graduating high school class we had was split up when they graduated and very few people stayed around. Only those people who happened to have a father who had a farm or who had a business stayed around. The rest of the people, no matter what they wanted, left the areas and they came to St. Louis and they went to Detroit and these areas. There was no choice there. I am not saying that everyone who graduates there wanted to stay or should have stayed, but those people didn't have a choice because there was no industry there.

Now, I would like to go on record as saying that I am for more jobs in the State of Missouri. I will reemphasize what I said earlier. I believe that in this area we can have our cake and eat it too. We can have the jobs but we can also have the clean industries. We don't have to pollute.

I might also say that another problem that we are involved in-- And before I go on I will talk a little more about charcoal kilns. We are just not dropping this thing and saying because they have a problem they are exempted from regulations forever. We are in the process right now of working with a consultant and we expect to fund in the near future a demonstration project of some new types of technology that we believe that he can afford if in fact it

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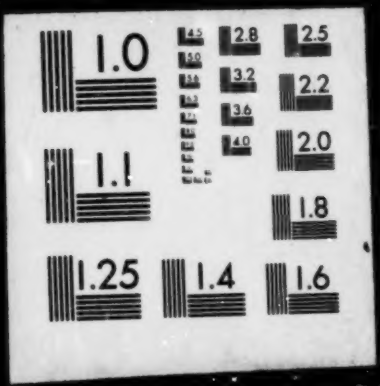
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works. We will be working with EPA on this and if it turns out that we can provide a technology that the charcoal people can put on their plant and it will work, at that point in time we will change our regulation and we will say that you can't emit that smoke any more. But we want to make sure that there is a way before we start requiring it.

Also in looking at industry in the State of Missouri I would say that our largest problems have not really been with the largest industries. That is provided that technology is providing control. Big companies have the money to add controls. They also have the technical people, the engineers and all of the technical expertise they need to put equipment in. It is available. If the regulation is written, most generally they go ahead and get started and sometimes it is at our insistence that they will normally do it.

The man who really has the trouble is the small businessman who doesn't have the money to put anything on and he doesn't know what to put on and he doesn't have anyone to ask. There are some things that the legislature has come up with to try to make this a little easier: a sales tax exemption now, there is a revenue bonding authority that has been set up in the State of Missouri whereby revenue bonds could be issued for air or water pollution control equipment, and during the present legislative session there is a bill in to provide a 5-year State income tax relief, much like the Federal tax relief. I don't know whether that will pass or not. I am not saying that incentives are absolutely necessary, we have regulations that say these things have to happen, but if you have an incentive type on the one hand while we push with our regulations on the other, sometimes you get results a little easier, and in a lot of cases you get the deluxe model instead of something less that you might have gotten had the incentive not been there.

The first area of the State that we looked at after the commission was formed was the St. Louis metropolitan area. Regulations were adopted for this area in 1967. Back in 1970 when the Federal Clean Air Amendments were being considered and finally adopted we took a look to see what the reductions of particulate emissions and sulfur dioxide emissions in St. Louis had been. Our estimates were very conservative. We didn't take into account any reduction because open burning had stopped. We did not extrapolate into areas where we didn't know what was going on. We strictly looked at control equipment that had gone on, the expected design efficiency of that equipment and decided what the reduction should have been.

H. Shell

We found that in the first 3 years of our program after the regulations were adopted that the particulates had been reduced by 60,000 tons per year, that the sulfur dioxide emissions by 180,000 tons per year. We were near the Federal SO_2 secondary standard in 1970 when the act was being considered.

I might say that when I started working for the commission back in 1967 at the Federal SO_2 air monitoring station in downtown St. Louis by City Hall the average SO_2 concentration was running 0.05 and 0.04 parts per million. At that same station the levels are now reading 0.02, 0.018 parts per million, so there has been a reduction. The same monitoring instrument, the same station. This is an annual average.

So we had a program that was under way. We also had the other regulations for the rest of the State adopted by 1970 and you can imagine our dismay at the time the new Federal law was passed because, as you would expect, it was a new law, it was a new program. There has to be a lot of confusion involving any new program. Nothing new ever works smoothly when it first starts. We did find ourselves tied up in an endless variety of new requirements and paperwork, a lot of work which we considered to be busy work, and we didn't quite know how to take it. We certainly had to look at our priorities again and try to decide which directions to go.

I think my commission at that time concluded that the act was good but that it was designed for the average State program. We felt like that we were ahead of the game, we were ahead of the average program. We felt like that the new act would slow our program down, but we said at the same time the new Federal law will speed up some of the lagging programs and get them moving and it is worth it to have our program slowed down if it gets the other States in the Nation moving. Some of that busy work is still with us, but we continue to endure.

One of the reasons that we have a lot of busy work is the fact that the Federal law is very specific. Any law that is written in a very specific way that says that you have to attain a standard at a particular date or you have to do anything in that manner really does box in the authorities that have to enforce it. It reduces the flexibility of EPA, it reduces the flexibility of the State. There were standards adopted. For instance, the new law said that in one month after the law was passed that EPA had to adopt--had to propose a standard and 3 months after that they had to adopt one.

They did this in 4 months and yet these are standards that are going to have a big economic impact on this Nation. They are standards that have to be met, they are going to cost everyone a lot of money. And yet I can't really say that there was only 4 months involved in adopting those standards, there was other knowledge that had been gained before then, but it was a very short time.

I found out yesterday that EPA is in fact planning to continue looking at those Federal standards, which I think is good. I suggested that in my paper. I think this is certainly something to do. I think we should make sure that we are shooting for the right thing and shooting for what is in the best public interest.

One of the standards that was set was the standard on particulates. I guess I especially differ with that one in that there are areas in the Missouri bootheel in the fall and out in Kansas where that standard is being exceeded where there is no industry at all. It is strictly from natural sources. When you are talking about particulates you are talking about everything under the sun. Obviously a little bit of cyanide or lead dust is much worse than a lot of lime dust, yet everything is lumped into one primary standard and one secondary standard.

I think that my opinion of particulates in looking at the measurements we have taken is that they are more closely associated with the general activity and the population of various areas, various cities, or the terrain and the amount of wind than they are industry. You can have a lot of industrial emissions of particulate and not show up a bit on your sampling station because there is a lot more dust and stuff on the ground that is ground up that blows back up in the air.

So I think that is one standard that should be looked at but I am not saying it is the only one. I think all of them should be reviewed almost on a continual basis because they will have a very big impact. Let's make absolutely sure that we are right. That would be one recommendation I would make to help our cause and help our relationship with the Federal Government.

Another thing that I would like to recommend is that we know that the Federal law is very specific. Everything is there, it is a recipe, recipe telling EPA how to do it and telling the States and local governments how to do it, except that the recipe may not bake the right cake. And I don't think any of us want to do the job on a recipe basis. I think we would much prefer to do some of our own thinking and exercise some of our own judgment.

So the Federal law is specific and it is very specific and there is no way to get out of that. And there are cases when EPA has to be very specific in what it requires of the States.

There are some cases that I believe, though, where there is room for flexibility. So I guess that I am saying that when EPA is getting ready to write a regulation or put out some edict that involves the States or local governments, look at it from the standpoint of whether or not you have some flexibility and don't box the States in. The Federal law seems to say that the States are partners with the Federal Government in this game and that is what we want to be. We don't want to be puppets who strictly read a recipe and this is the way the things will go.

I have to admit that the implementation plan regulations that were published that we were forced to go along with were the most difficult and the most specific type regulations I have ever seen. It amazes me that any State has ever had a plan approved if you went word for word on those regulations. That is really the type of thing I am talking about. So I am saying be a little more general where you can, although I realize there are many cases where you can't be general.

Another thing that I think is important is that I think that a lot of the policy decisions, not all, some of the policy decisions that are made don't really include enough thought on how those decisions might involve the States. I have had a lot of input into some of the things that the Federal Government has been doing and I am not saying or even trying to say that we don't have some input. I am trying to say that when something is being looked at, like a new source performance standard, there are many things to look at there, the health effects and the levels and the air quality measurements and all of these things such as that, but equally important, I think, to looking at that standard from the technical viewpoint is how can that standard be used by the States, can the States pick it up, do they have any flexibility, can the authority be delegated to the States? I am just saying that when these decisions are made always keep in the back of your mind that the States are partners so give some equal thought to the fact that the States are involved and that they have to be a part of it.

I think that the last thing that I would like to at least wish for is that there could be a little more State representation on some of the national advisory committees. I served on the National Manpower Advisory Committee for a year. I am well aware of the fact that there are States where the government is represented on these national committees. I think this is good except I think it would be a little better if there could be a few more on those committees.

In looking at the members of this committee here, I find that there is one State represented, a man from the Attorney General's office in Illinois. Maybe that is the magic number. Maybe you should have one more member who is a commission member from one of the States. But this is still a thought.

So finally I guess I will just close by saying that I know a little bit about what other States want, I have worked with other State directors. I think all of us want to do the job and we really just ask that EPA let us do it.

That is really all I have.

(Mr. Shells' written statement follows:)

Missouri's Air Pollution Control Program

H. D. Shell, Executive Secretary
Missouri Air Conservation Commission

The Commission for which I work was formed by an act of the Legislature in 1965, and that law was amended again in 1972. Basically, it consists of the following:

(1) That a seven member board be established of which not more than four members can be from the same political party. The board will be parttime and unpaid. There can be no more than one member from any Senatorial District, and the decisions are thus not concentrated, but statewide in scope. The responsibility of the Commission is to control air pollution throughout the state.

(2) The law provides for the Commission's adoption and enforcement of air pollution control regulations. Regulations must under go public hearing with at least thirty (30) days notice prior to their adoption, and the enforcement is carried out by a state agency consisting of twenty-four (24) people.

(3) The law also provides for participation by local agencies. To obtain exemption, local agencies must adopt regulations as stringent as those of the Commission, and also, must show that they have the intent and capability to enforce their ordinance once it is adopted. The state maintains concurrent jurisdiction within the local areas, however.

(4) Variances or time to achieve compliance with the Commission's regulations may also be granted. The Commission may hear appeals on enforcement orders that may have been issued.

(5) Construction permits are required for any new or modified facility. A construction permit may be issued, if a new plant is expected to be in compliance with the regulations once construction has

been completed. This keeps non-complying operations away, and gives the Commission some control over degradation.

(6) The law also provides for injunctive and monetary penalties. The monetary penalty is a maximum of $5,000 per day. Penalties would only be imposed if conciliation and appeals fail to bring about abatement.

So much for the specific provisions of the law. There are two basic assurances in the law that the people of Missouri will continue to be well served:

(1) The Commission is nearly bipartisan. The membership is four-three. It is unpaid, and pork barreling is thus avoided. Decisions have been made in the past and will continue to be made on a practical rather than a partisan political basis. This is important. Partisan politics in something as intricate and with as many facets as air pollution control really have no place. No one has used, nor is expected to use membership on the Commission as a launch pad for higher political office.

(2) The other assurance is that the Commission has a dual responsibility. It is not only responsible for adopting control regulations, but is also responsible for their enforcement. There is no gain achieved by grandstanding for purposes of the press, and adopting a ridiculous regulation. Later the Commission must try to enforce that same regulation, and if it isn't workable, the grandstanding will reverse itself. The same check applies to decisions on variances, appeals and other things that the Commission is involved in.

We believe these assurances to be valid. They have kept the Missouri program on an even keel since its beginning. In addition, four members of the seven-member Commission have served since it was first established. There are thirty-three years of service experience and expertise currently represented.

Progress has been made in Missouri during the past six years. Regulations apply to all parts of the state and have been found to be workable. Many companies have come into compliance. Pollution levels have decreased.

The regulations are general in nature and control particulates, sulfur compounds, and odorous emissions. They have been enforced by the state agency, and five local agencies; St. Louis County, City of St. Louis, Independence, Kansas City, and Springfield.

Additional regulations are currently in the process of being promulgated. It is planned to soon have regulations for controlling lead emissions from smelters, and nitrogen dioxide from nitric acid plants.

There are also some specific problems we are looking into. Emissions from charcoal kilns can be controlled. Technology is available, but it cannot be applied because it is too expensive. One cannot put a $5,000 afterburner on a $3,000 kiln and stay in business. Our regulations excepted charcoal kilns since it was not in the public interest for them to be required to shut down. We are currently attempting to develop applicable technology. There are many similar problems yet to be solved. The small businessman generally has neither the technical expertise nor the money to solve his problems.

Sales tax exemption in Missouri is an incentive for the installation of air pollution control equipment. It generally causes the recipient to take the extra step toward better control.

The first area of the state for which regulations were adopted was the St. Louis Metropolitan Area, and those regulations had been enforced for three years before the federal Clean Air Amendments of 1970 came along. By 1970, the particulate emissions in the St. Louis Region had been reduced by 60,000 tons per year, and the sulfur dioxide emissions, 180,000 tons per year. We were near the federal sulfur dioxide secondary standards in 1970. Compliance in the remainder of the state was well underway.

You can imagine our dismay when the federal program evolved in 1970, and we were suddenly confronted by new standards, implementation plans, and an endless variety of new requirements. The busy-work which evolved caused the Commission to take a second look at its many priorities. It took the position that "although it felt the federal program was slowing the Missouri program down, that it would try to comply, and perhaps help speed other state programs up".

We have now had two years of experience under the federal law. We have enjoyed a very good relationship with the Kansas City regional office of the U. S. Environmental Protection Agency, but continue to be perplexed by the many edicts that come from the Environmental Protection Agency in Washington and Durham.

We realize that the 1970 law is very specific in its requirements, and in many cases, it is impossible for the Environmental Protection Agency to do other than be specific in its regulations. Ample time was not given to develop workable federal standards, and even though they have already been set, EPA should continue to evaluate the standards for possible improvement.

The particulate standard is a good example. Particulates constitute a tremendous number of different materials. In other words, particulates result from any emission of solids. A little bit of cyanide particulate is very hazardous, whereas large quantities of limedust would not be equally as bad. Yet, particulate standards which would classify each in the same category were adopted. There was also no allowance made for particle size distribution, or background levels. Anyway, the particulate and other federal standards should be looked at again. I am not implying that they are either too high or too low. I am simply saying that they should be better substantiated.

As stated earlier the federal law is very specific. We think, however, EPA's regulations could be more general in many cases than they are. Air pollution control is supposed to be a state, local, and federal government partnership, and I am sure that was the intent of the federal law. When the EPA regulations become too specific there is no longer a partnership. The states and local governments are no longer flexible. We have to do specifically what the federal EPA says that we should do, or we are in trouble. If we default in any way, the EPA can enforce within our state, take the money from our grant for payment, or take other actions against us. We want to work as a partner with the EPA, but we do not want to be puppets. EPA should be more general!

I also believe that if the states were allowed more representation on some of the national air pollution control committees, that policy could be more easily implemented. There would be a greater feeling of partnership, and a greater vested interest. Some states those committees would be in the public interest.

And finally, when policy is being set at the EPA level be sure to keep the states in mind. Too often something is looked at from the standpoint of the EPA workability without really considering the needs of the states. When a hazardous pollutant standard is being developed, equally important should be the development of some mechanism to delegate authority to the states to enforce it. Otherwise, EPA adopts something, the states cannot enforce it without delegation, and it appears that the states are not interested. We are vitally interested!

I have been speaking for Missouri, but am well acquainted with the thoughts of many of the other state directors. I believe that all of us want to be a part of the team. We want to do the job, and are willing to work with EPA. We hope that EPA will work with us, and will not box us in, or tie us up with too much busy-work. Allow us to do the job that is required by not only the Clean Air Act, but also by our own state laws.

Thank you very much.

MR. BARNES: Well, thank you very much for your statement, Mr. Shell.

I would like to respond just quickly to a couple of the points that you make. I think the feeling of the Administrator of EPA, Mr. Ruckelshaus, would be very much akin with yours on the need to have a much better working relationship with the States as we develop standards. I think we are hopeful, at least in the water area, where we are in the process of unfolding the new water act, where we do have and bring in about every 2 months a group of about 10 State water pollution control directors to really work over the regulations with us. I know that doesn't help you any in the air area, but I think we have been very pleased with our response so far there and about the only complaint we have had is that I think some of the other 40 would also like to be in, but I think that we are starting to get a little better handle on some techniques we can use to bring that wealth of experience that you and others that have been on the firing line for a while have in the development of those regulations.

And the other point, I think you made a very good point about the need to continue to assess our standards, and there is a fairly extensive program in EPA to try to develop new health effects data, and so on. And as you very correctly pointed out, the Clean Air Act of 1970 put us under some very tight deadlines for the development of criteria documents and standards, and so on, and we even now don't have near the amount of health data that we want.

And I think you might be pleased if you had a chance to explore with some of the EPA people some of the findings that we have developed so far in our CHESS program, because I think they have taken your suggestion that we look at the breakdown among particulates, not just taken as a growth category, but we have had some tentative findings that would seem to suggest that, for example, suspended sulfates in the air seem to be more of a health problem than as a trigger of asthma, and so on, than as just the overall particulate count.

So I hope that you will see some things out of EPA over the next few years as we really try to refine and fine tune this area that will--that you will be pleased to see.

Dr. Lohse, you have a question?

DR. LOHSE: Yes, sir. I assure you that you have some of my personal sympathy because the Texas Air Quality Board and the Texas Water Quality Board both from time to time wish the Feds would stay out of the State affairs and let us clean up the Houston Ship Channel in our own way. But nevertheless, we do have this Federal-State relationship, you know, and if we can tune it up, as Mr. Barnes said, and get it going, why, we can accomplish more together than we can individually.

I am interested in the record of performance accomplished by the State of Missouri without Federal assistance, so my question is directed to that.

As I understand the history of the Missouri Air Conservation Commission, it was established by the Missouri Legislature in 1965 with certain regulatory responsibilities and powers? All right. As I understand, then, from your text, from 1967 to 1970, 3 years, in the St. Louis metropolitan area, the particulate emission was reduced 60,000 tons per year and the SO_2 emission was reduced 180,000 tons per year. Then in 1970 the Federal Clean Air Amendments were imposed upon the State of Missouri, Texas and all the others.

Now, my question is, in the 3 years since then, the 1970 to 1973 period, what has been your rate of particulate and SO_2 reduction?

MR. SHELL: I really can't give you that answer. All I can do is answer it in this way. We got down to the count station here on SO_2 this past year to 0.02 parts per million. We were somewhere beyond that. I don't know whether we were above 0.03 or not in 1970, but we were above, I am sure, the Federal secondary standard. Mr. Copley might know this. I know that particular station has come in.

I might say for the benefit of the audience it might be interesting to state that suspended sulfates are different than sulfation data. You mentioned the fact a while ago that suspended sulfates might in fact be the big problem and there are probably people in the audience who think this is sulfation data. It is not at all. It is sampled in a different way entirely.

DR. LOHSE: May I ask, verify?

MR. BARNES: Yes, sir.

DR. LOHSE: I appreciate I asked you a hard fact question and it is a little unfair because you don't carry all those numbers around in your hip pocket. But can you give me a description of the trend? What do you feel has been the trend? Has the Federal Clean Air Amendment interfered with the progress the State of Missouri was making or has it accelerated it or are you holding things in abeyance to determine if Mr. Ruckelshaus's team is going to do it for you? What is the situation?

MR. SHELL: I think that the Clean Air Amendments have helped us in some areas. I am very sure that they have helped us in getting support from various citizens' groups and others and just plain enough talk about this in newspapers and the press to make people aware of it, that made our job easier, there is no doubt about that.

I am quite sure that the manpower training that we have gotten from EPA, the research that is going on to develop sulfur removal technology and other things will certainly be of great benefit to us.

As far as the implementation plan is concerned, we had our regulations that are part of that plan when the Federal act was passed. Our regulations are approved. I question, I guess, and this is strictly for the State of Missouri, on whether it is better to take engineers and technical people away from enforcement and away from trying to develop compliance schedules of companies, and so on, and putting them to work on trying to draft a plan or trying to draw a Federal report. From that standpoint I have to say that this has taken us away from some of our enforcement duties, I don't have any doubts about that.

As far as whether it has hurt the program or not, there have been many benefits that have come along with it.

In fact, probably we would not have got our stronger law last year had the Federal law not come along in 1970.

MR. BARNES: Mr. Kimball.

MR. KIMBALL: Aside from the research, talking now about implementation of standards, what role do you feel the Federal Government should play, if any?

MR. SHELL: Well, I feel, of course, the Federal Government has to be involved in interstate areas. I really don't know how the Federal Government can best look at a State and see whether its program is up to par or not. I don't know whether the regional administrators would be able to look at 3 or 4 or 5 States within a region and know exactly how those States are doing unless there is a lot of documentation and a lot of paperwork and a lot of forms sent in.

I guess that I would like for EPA to stay there to work with us to let us do as much of the job as possible, at the same time to try to reduce a lot of the busy work we are confronted with. Here again I am only speaking for Missouri. If I had 200 people in my agency I might be looking for some busy work, but I am not. I would prefer to use my people for enforcement work. If they could somehow sit where they are, look at what we are doing, make sure that we do it, but at the same time reduce some of the busy work and the paper workload in the States, this would help.

Also, and this really gets back to another recommendation when I was talking about policy, but in St. Louis we were told that we were above the NO_2 standard, that we were going to have to do something about it. This was a good while back. We told EPA that the analytical method used to get those numbers was no good or was only about 30 percent efficient, that how could we adopt a regulation if we couldn't justify this thing in any way if in fact we didn't know where we were, and we didn't know where we were based on that method. I am not sure whether that standard could be good either if the analytical data used to try to correlate the air quality level with the medical effects, on whether that method is good.

But anyway, we told EPA that this standard was no good. EPA said, we are sorry, we can't approve the implementation plan unless you adopt NO_2 regulation that would apply to small oil- and gas-fired burner nozzles and that you write a regulation for one nitric acid plant. We only have one nitric acid plant in the St. Louis region, which is in south Jefferson County. It is one of four in the State of Missouri; it is the smallest of those four. You can't write a regulation for that nitric acid plant just for St. Louis for a small plant and let all the other big ones go.

So we didn't disagree with that, we disagreed with the timing. EPA went ahead and promulgated a regulation or proposed a promulgation and said, you adopt this, we are telling you to take this to your commission and tell your commission to adopt it, but we can't justify it because now in fact we have found that the analytical method is wrong.

So we had no justification. The commission said no. Then later EPA said, we are giving a year on this.

These types of things bother the States. I don't know how you avoid them because with everything happening as fast as it has to happen, then you are going to have some confusion and problems.

MR. KIMBALL: Don't you--

MR. BARNES: I am sorry.

MR. SVORE: Harvey, I just wanted to ask you one question. You are referring to EPA's being responsible for your busy work. Are you referring to the act or are you referring to something that we have required you to do that wasn't required under the act?

MR. SHELL: Jerry, I am really not sure. I know that the regulations that were published in the Federal Register that told us how to prepare implementation plans were very specific right down the line. Now, I had some input in those and where I could I tried to keep from being boxed in. But when they were finally adopted there were still some very specific areas in there.

I am not real sure whether these areas were specific because EPA thought they should be that way or whether they were that way because the Federal Act required that they be that way. I am just saying that--

And you know, I guess part of our dismay is the fact that we prepared an implementation plan under the 1967 act, submitted it, got it returned, we are dealing pretty much directly with Durham at the time, we send more material in, get it back, and this kept growing, it got real thick. And the new act came along and was passed and that was called the existing plan and the law said that there would be deficiencies listed on existing plans and the States would correct those deficiencies and they wouldn't have to do all those things again, that was the pitch that I got.

So we started correcting deficiencies and I had 3 engineers trying to do that half of the summer and then toward the end of the summer the new Federal Register came out on how to prepare these plans and it was a whole new ball game and we started developing this plan again. We got it developed between August and the next February.

So we have in fact developed 3 plans. We developed one, modified it, developed another, and these things are as thick as the Sears and Roebuck catalogues, thick, lots of work, money.

MR. BARNES: Mr. Kimball, we will give you the last question here. We probably ought to move on.

PROF. HOLDEN: Mr. Chairman, if it please, I want to follow Mr. Kimball. I do have some questions.

MR. BARNES: Oh, I am sorry, I didn't--

MR. KIMBALL: I defer. Time is of the essence. Go ahead.

MR. BARNES: All right. Professor Holden.

PROF. HOLDEN: I am willing to go after Tom, but I do have some questions.

MR. BARNES: No, go ahead.

PROF. HOLDEN: All right.

I have four questions, Mr. Shell, and they are four basically factual questions. The first one is how many people and how much money do you have in your agency, how big is it?

MR. SHELL: I have 24 people on my staff. Of this number about half are technical people.

PROF. HOLDEN: All right.

MR. SHELL: Now, this is in Jefferson City. This is the State agency.

PROF. HOLDEN: Yes.

MR. SHELL: The local agencies would add about another 120 people or so. So we have got in the State of Missouri, counting State and local agencies, probably something like 130 or 140 people.

PROF. HOLDEN: My second question is just a question about the base on your 1970 figure. By 1970 the figure on emissions was reduced by 60,000 tons and SO_2 by 180,000 tons, and so on. What is the significance of those numbers? The question is what is the base against which the figures of 60,000 tons reduction and 180,000 tons reduction compare?

MR. SHELL: We did an emission inventory in the State of Missouri back in I think it was 1968 or 1969 to comply with the 1967 act and we had certain reported emissions for the companies of all types in the St. Louis region. The regulations had become effective in 1967. These companies started putting controls on and I really know what you are asking for. You are saying how much is 60,000 tons--

PROF. HOLDEN: I am asking what is the percentage reduction.

MR. SHELL: What does that constitute as a percentage reduction and I say that I don't know. I would take a guess. On sulfur dioxide I would guess that that would represent about 50 percent reduction. On particulates I would say the particulate reduction would be considerably less and I have no way of knowing what that would be.

The reason that I am very sure of the sulfur dioxide is the fact that a regulation which calls all of the smaller utilities in downtown St.Louis to convert to low sulfur coal went into effect back in 1968 and in 1970 at all of the older powerplants which were of the larger variety, the Union Electric powerplants on both sides of the river in the center city, low stack, older plant area started converting to use low sulfur oil. That conversion is just about complete and they have had some relapses of late because of the oil situation.

PROF. HOLDEN: My fourth and final question concerns variances which have come up before.

MR. SHELL: All right.

PROF. HOLDEN: Roughly speaking, how many cases a year in which you grant variances and how many variances in the run of any given year do you refuse to renew because people are not meeting their schedule?

MR. SHELL: I would say--you are asking me for facts. I don't have those with me so I am taking a guess and I know how many times we meet each year and I would guess that we probably grant around 50 variances a year, in that order of magnitude.

PROF. HOLDEN: And you refuse to renew, same kind of guess how many?

MR. SHELL: Well, you see, when we grant a variance, we have looked at this company's compliance schedule and we have looked at it from the standpoint that it probably won't be completed this year, it may be 2 years from now. The only one that I can think of that we--no, there is two that I can think of. One was in Springfield, Missouri, and one was out east of Kansas City where they didn't accomplish what they were supposed to do during the year or make any progress and the progress that they should have made, and we should have caught up with it earlier, we finally decided we just couldn't go on with it, we said there was no variance and I issued an abatement order.

PROF. HOLDEN: As I understand you, then, you say you grant about 50 variances a year for the last 7 years to come up to--

MR. SHELL: No, I didn't say that. I say that we are granting about 50 a year. The number has increased as time has gone by. And of those that we are granting now a good portion of these do go to smaller companies. I know there were some big companies on the list yesterday, but a good portion of these variances are--

PROF. HOLDEN: It would be 2 out of 50 or 4 percent.

MR. SHELL: Something like that, yes.

PROF. HOLDEN: Or put another way, 96 percent of the requests for extensions stand?

MR. SHELL: Yes.

PROF. HOLDEN: Thank you.

MR. SHELL: But we are very sure of ourselves before we grant the thing in the first place.

PROF. HOLDEN: Thank you.

MR. BARNES: Well, thank you very much, Mr. Shell, for being with us today. I think your statement and this interchange has been most helpful to the Board.

At this point Mr. Charles Copley was scheduled to speak and he has very kindly consented to let Mr. Carol Thomas take his place so Mr. Thomas can make a plane back to Washington.

Carol Thomas is presently the Director of the Office of Civil Rights and Urban Affairs in the Environmental Protection Agency in Washington and he will be speaking to the topic of air pollution in the inner city and letting you know of some of the things and activities that EPA has going on in this regard.

Mr. Thomas.

CAROL M. THOMAS, DIRECTOR
OFFICE OF CIVIL RIGHTS AND URBAN AFFAIRS
U.S. ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

MR. THOMAS: Thank you very much, Jim.

I must apologize to the Board for having to intrude on your schedule in this fashion. However, when we determined that I would be the last speaker of the day we reckoned without the noise pollution problems in the Washington National Airport area. Because of noise pollution problems, no planes are allowed to take off or land after a certain hour at National Airport in Washington, so in order for me to meet my schedule back in Washington I have to leave a little earlier than anticipated.

I am pleased to have this opportunity of appearing before this Board to direct its attention to the problem of the inner city resident and air pollution.

Tuesday and today the Board has heard a great many speakers from both control agencies and the public. My role is to speak within EPA for a segment of the public most impacted by air pollution, namely the residents of the inner city. The Urban Affairs Staff in my office was established to provide an EPA focal point for coordinating communications and programs dealing with problems of the inner city environment.

Some may think it strange to concentrate on the urban scene, much less the inner city, in an agency devoted to the protection of the environment. Our behavioral and aesthetic norms still refer back to rural values.

The reality of our daily surroundings, however, is radically different. Most Americans are born, work, recreate and die in an urban milieu. By the time most of your children go to college, we will be almost totally a nation of gigantic regional cities and linear conurbations stretching from our coasts on both sides of the country and around the Great Lakes.

The same pattern is manifest all over the earth. In fact, at the turn of the next century probably 50 percent of the world population will be urban.

Today, indeed, almost no one enjoys the kind of rural serenity of 50 or even 30 years ago. Our cities have grown too large for comfort. They are overloaded, dirty, unsafe, unhealthy and unstable. This is not the fault of those who live there. It is not a matter of face or education or income or personal virtues, but of circumstances we have the power to change. The city is life's stage for the majority, like it or not.

I fervently hope that no one of this Board will harbor the illusion that we can upgrade the environment or insure civic peace without rehabilitating the worse enclaves of urban despair and degradation. Of the environmental challenges facing us today this is the most pressing and persistent and resistant to solutions. But we must find answers because all of the ecological problems which beset us, and most particularly foul air, are amplified by poverty. They increase in magnitude and cost as we penetrate into the city.

It is the inner city dweller who suffers most from the sickening smog that irritates eyes and lungs. In most instances the urban poor in this country breathe the most polluted air. They live where the automobiles are bumper to bumper, where high sulfur fuels are burned in homes and factories, and where smog is most likely to blot out the sun. Indeed some studies show the length of life itself of the inner city dweller may be significantly shortened by his squeezed impure environment.

What is this inner city of which I am talking?

Although the term inner city and the set of conditions that term represents convey a widely and generally understood meaning, it would be well to discuss this definition further. The inner city has no discreet geographic boundaries which set it apart from the rest of the urban area. It includes the decaying older areas generally found in the heart or center of the urban core. In some cases, however, the isolated sections of a metropolitan area away from the central core may also contain inner city characteristics. It consists of sections of the central city which usually are proximate to the old central business district. As I use it here it means areas of the central city in which housing, business and infrastructure are in the process of deteriorating or decaying and areas contiguous to or enclosed within such deteriorating sections.

Deterioration of the central city has grown and spread in the last 30 years. As older neighborhoods drain of their more economically able households, the pace of community and economic decline accelerates. Additionally the construction of highways and freeways through such neighborhoods hastens deterioration and conversely deterioration lowers land values and encourages further highway intrusions. At the same time the housing is being depleted, overcrowding in remaining units rises as the margin narrows between feasible rent levels and the expenses of amortization, taxes, utilities and maintenance. Maintenance and modernization are the first expenses to be eliminated in this squeeze, and overcrowding hastens building wear and appreciation. Environmental hazards such as flaking lead paint and garbage accumulate and buffers to pollution such as air conditioning, insulation and maintenance are not provided.

Living in these areas in comparatively crowded conditions, both in their homes and their neighborhoods, are densely concentrated populations, including large numbers of ethnic and racial minority groups, of the young and the old, particularly those with debilitating conditions, and of the poor, the people believed to be the most susceptible to health problems contributed to by pollution.

Neither decay nor minorities predominate throughout all city areas or within the inner city itself. However, middle and upper income families living within the inner city are not spared the impact of air pollution, noise and other environmental ills. Yet to some extent they can insulate themselves from some of these problems. Air conditioners can partially mitigate the effects of air pollution and shut out street noise. Better living conditions within the home to some extent may offset external environmental surroundings, and higher income and mobility make it possible to escape periodically to better environments. These opportunities are not available to the inner city poor.

What, then, is the impact of air pollution on this mostly very young and very old and very poor population?

Consider the health effects alone. If he were to live his entire life in the situation described, an inner city resident might be exposed to environmental pollutants from conception to death. An unborn child in the inner city may be subtly affected by pollutants to which its mother is exposed. Thus, her developing baby could be adversely affected by carbon monoxide, polynuclear hydrocarbons, lead, cadmium and possibly other pollutants. Our national environmental research centers are quantifying the impact of such exposures. At birth the inner city infant, who is more often premature, may be subjected to an exposure of carbon monoxide which might aggravate any respiratory difficulties complicating infections or hemolytic anemia and the accompanying jaundice. After discharge from the hospital, the inner city baby is more likely to develop iron deficiency anemia, the effects of which can be accentuated by exposure to high levels of carbon monoxide.

Based on current knowledge, the most serious direct health effects of inner city environmental pollution are those associated with air pollution. Air pollutants will increase the susceptibility of the inner city resident of all ages to common acute respiratory disorders, including colds, sore throats, and bronchitis. Inner city citizens will also be most affected by irritating, at times disabling, symptoms of the eye and respiratory tract during acute air pollution episodes. Symptoms of chronic respiratory disease such as bronchitis and emphysema are increased in young adults who are exposed to high levels of sulfur dioxide or mixed urban air pollution which are found in the inner city. Even before chronic respiratory disease symptoms appear, lung function may be shown to be decreased in inner city children exposed to high pollution levels. This decrease in lung function is also present in well adults. Acute air pollution also has been linked to fluctuations in daily mortality rates in metropolitan areas.

Inner city citizens suffering from specific chronic illnesses will undoubtedly be more adversely affected by air pollutants than suburban residents with the same disorders because of the higher pollution concentrations. Air pollutants might impair the limited physiologic reserves of the patient with sickle cell disease, or iron deficiency anemia. Air pollution aggravates asthma and exacerbates the symptoms of pre-existing chronic heart and lung diseases.

The Administrator of EPA has cited many of the above reasons as the basic reasons for establishing my office, the Urban Affairs Division, with its urban focus.

Air pollution, then, is a womb to tomb, often unseen, but all-pervasive crippler and eventually killer of a most susceptible victim--the inner city resident. And this is based on the little we know to date. Our ignorance is great. I enlist your continued support of health effects research and monitoring to provide the needed data base to determine additional standards and programs to protect life in the inner city.

I also encourage organizations such as Black Survival, Inc., to continue their efforts to arouse the public to apply pressure to those at all levels to take the concerns of the urban area into consideration.

For those not satisfied with an overview of health effects, allow me to consider the impact of one pollutant of particular significance to the inner city resident, namely lead. Lead is a known toxic substance for which no beneficial biological role has yet been demonstrated. The Department of Health, Education, and Welfare estimates that 200 children die each year from lead poisoning. There are many who feel that that is a very conservative estimate.

Lead appears to do more damage to people of less weight, therefore, the children are most seriously affected. Evidence today indicates that it can cause retardation of mental faculties. I recently read in a black newspaper the description of a 7-year-old child unable to talk or comprehend what goes on around him. He was the victim of lead poisoning.

Although lead-base paint is considered to be the prime causal factor in childhood lead poisoning, National Academy of Sciences and EPA reports indicate air lead and lead which settles out from the air to contaminate dirt and dust contribute significantly to this problem. We know large percentages of children ingest non-food objects, including dirt and dust. Levels of lead in street dirt and house dust in urban areas have been found to be far greater than those considered safe, even, in paint by the Food and Drug Administration.

Who, then, is the culprit? The evidence that we have to date points to the presence of lead in gasoline. Over 90 percent of airborne lead emissions are a result of combustion gasoline containing lead additives.

Nor is this solely a childhood problem. Although average blood levels among urban populations are within limits, considerable numbers of individual urban adults are found to have blood lead levels in excess of the public health danger level. The recent findings of the various agencies and concern for the urban population have led EPA toward setting a more stringent standard for lead. This is as it should be. For although the evidence is incomplete, it does suggest that airborne lead is contributing to excessive total lead exposures among the general urban population. The

National Academy of Sciences study of lead called special attention to the concept of "expotentially increasing risk" associated with arithmetic increments in blood lead levels. Studies have demonstrated that people who live and work in the center of the city have significantly higher levels of lead in their blood than suburban residents who work outside the city or than suburban residents who work in the inner city. Accordingly, every reduction in exposure to lead can significantly reduce the risk of lead poisoning or permanent neurologic deficit. Our overall goal should be to eliminate all preventable lead exposures. The fulfillment of this goal should be a concern of the general public. To the inner city resident it should be a vital one.

The impact of lead taken apart from other pollutants serves to illustrate and dramatize the situation. However, our concern stretches to all air pollutants singly or in combination as they reduce the quality of life in our cities.

What will be our response to this challenge? The Office of Civil Rights and Urban Affairs at EPA solicits the views of inner city community organizations and insures that they will be central in the formulation of more effective EPA programs and in the establishment of EPA promulgated standards and regulations as they relate to the urban areas.

Realistically, improvement of the inner city environment involves far more than an attack on environmental pollution.

It must involve a concern for other environmental ills such as neighborhood decay, impact of highway intrusions upon neighborhoods,need for adequate recreation and open space, and upgrading of environmental health services. Further urban environmental problems can be sharply differentiated from other inner city problems such as poverty, education, unemployment and crime. We recognize that in many cases these are of greater priority and more immediate social and economic impact than is pollution control. However, EPA's mandate in these areas is limited. My feeling, however, is that because the environmental pollution goes to the heart of the public health, that this should have a much greater priority in the minds of the public than it has had to date.

Therefore, to have maximum beneficial impact--to achieve a maximum beneficial impact on the quality of life for inner city residents, EPA's pollution control program must be linked to other programs to upgrade environmental and economic conditions and community services in the inner city. In this regard, I hope that EPA's concern and involvement may serve as a useful catalyst through which we can stimulate and participate in comprehensive environmental improvements projects which extend beyond EPA's specific area of responsibility.

The reports on EPA's specific role have been given in some detail by earlier speakers. Allow me a special perspective in summarizing. Health effects research programs known by such acronyms as CHESS and CHAMP provide the epidemiological data base for more effective standards and programs. Land use and pollution studies point to the new directions encouraged in the past by this Board. Regional, State and local control officials have reported on the status of State air plans, the implementation of which we believe will protect the health of inner city residents with respect to the pollutants involved. Most importantly, concerned citizen leaders, without whose pressure there would be no clean air act, have called for all of us to redouble our efforts to reach at least the primary air quality standards.

In conclusion I urge you, the members of the Board, to continue to demand environments which ennoble man and amplify his potential instead of destroying it. Recognizing the inner relatedness of our problems, I hope we have the uncommon sense to follow up on our emerging insights.

Allow me to pose an immediate challenge to all of us based on the above. Namely, let's get the lead out! And in doing so, let us forge the kind of links between control agencies and public associations to continue our endeavors until we have not just a marginally healthy but a restored quality environment for all.

Dr. Martin Luther King's dream of a good life for all God's children is a tremendous challenge that you may think exceeds the abilities of ordinary men like ourselves, but as Admiral Halsey once said, "There are no great men in this world, only great challenges which ordinary men rise to meet."

And with that, if there are any questions, I will be glad to answer them.

MR. BARNES: Thank you very much for a very excellent statement there, Carol.

Do members of the Board have any questions for Mr. Thomas?

PROF. HOLDEN: Well, Mr. Chairman, having taken up more than my share of the time this afternoon, I will take up some more, if I may.

MR. BARNES: Certainly, if you have some questions.

PROF. HOLDEN: Yes, I have 3.

MR. BARNES: O. K.

PROF. HOLDEN: My first is whether Mr. Thomas is able to tell us anything about the status of the report of the Administrator's task force on environmental problems of the urban poor that is referred to in the Senate committee document that was sent to the Board?

MR. THOMAS: That report was not actually the Administrator's report. It was a report of the task force to the Administrator and it was never issued as an official EPA document, the reason for that being that there were a number of problems set forth in that document about which EPA could really do nothing, as I indicated in my talk before.

In addition, there were some problems regarding research, regarding the information that was contained in there, which would have taken a considerable length of time to iron out. What we are--

PROF. HOLDEN: Mr. Thomas, just to expedite, may I ask if the substance of Mr. Lombardo's comments on page 21 of that Senate document represents a digest of the report or was he speaking for himself there separately from the report? I ask because he refers to things that seem to be in the EPA jurisdiction.

MR. THOMAS: I don't recall what was on page 21 there, but as I understand, as I am aware of Mr. Lombardo's statements in general, he was speaking for himself in most instances.

PROF. HOLDEN: All right, fine. I don't want to drag this out.

My third question goes to the meeting of this Board in San Francisco last year when we took under consideration various aspects of land use policy, and I simply want to know if you are able to say--if it is a mistake or you are not able to say, I will accept that--whether you are able to say whether or not EPA in thinking about its own role in land use policy has put some meat on the bones that we there refer to, and as we spoke of our language was rather complicated, but we said in effect in thinking about land use planning, think seriously about the different distribution of people around metropolitan areas and what land use policy means there. That is what it came down to say. Now, is there work going on in EPA that has that specific focus?

MR. THOMAS: Yes.

PROF. HOLDEN: Are you able to describe that work or not?

MR. THOMAS: EPA last year initiated a study with the Youth Advisory Board, I should say boards, around the country. Some initial studies--

PROF. HOLDEN: Not on land use policy in general, now, I am not asking about land use policy in general, I am asking specifically about land use policy implications in relation to the subject matter of your statement.

MR. THOMAS: We have not gotten into that yet.

PROF. HOLDEN: O. K.

MR. THOMAS: What we are doing now is setting the groundwork, laying the groundwork for that investigation.

MR. BARNES: Professor Holden, I think when we take a break here in just a minute you may want to consult with Ron Venezia here who is from the land use office and can probably go into some detail on some of your questions.

PROF. HOLDEN: That is fine with me.

Let me ask you one other question. On page 9 of your statement you refer to the--well, let me get the language exactly and I won't have to guess at it. Page 9 of your statement says, and I quote:

> The Office of Civil Rights and Urban Affairs at EPA solicits the views of inner city community organizations and insures that they will be central in the formulation of

> more effective EPA programs as they relate to urban areas.

That is a direct quote.

Would you explain to us a little bit in detail what the procedure is there in view of the other colloquy between myself and Mr. Senturia with respect to citizen participation?

MR. THOMAS: What we are hoping to do is to very specifically generate dialogue between my office and community organizations, both national organizations and local organizations such as--

PROF. HOLDEN: Have you been able to do that yet?

MR. THOMAS: Yes, we have initiated--

PROF. HOLDEN: How long have you been doing it?

MR. THOMAS: We have been involved in this for several months now.

PROF. HOLDEN: Can you give us some rough notion of how many cities you reach into and what kind of organization you have effective working relationships with on that basis?

MR. THOMAS: We have not established detailed working relationships. What we have done is to establish contact with organizations in Pittsburgh, in Baltimore, in Washington, in Los Angeles, in New York City, in Chicago.

There are local organizations in those cities which we have established contact with and which we are attempting to work toward a working relationship for the future as regards this problem here.

PROF. HOLDEN: Thank you.

Thank you, Mr. Chairman.

MR. BARNES: Thank you very much for joining us.

DR. LOHSE: May I?

MR. BARNES: Yes, go ahead.

DR. LOHSE: I won't take but a second.

Mr. Thomas, I do not want to detract from the weight of your presentation because I agree wholeheartedly with everything you said, but I am going to address myself to your reference to some scientific data which I feel was inaccurate. And I know that you did not generate these data to which I am going to refer, but for the record I would like to correct it. It is applied with criticism. I direct it not to you but to the Administrator, who is responsible ultimately for everything that the Agency does.

Now, your references to lead poisoning and blood lead levels, these are all fine things, you are absolutely right in the horrible consequences of excessive lead and excessively high blood levels, and so on, I concur wholeheartedly, but we cannot group all lead in the same category. The detrimental health effects of airborne lead, that is inhaled through the atmosphere, as compared to ingested lead, that which we take into the system through food and even moonshine whiskey--and incidentally, there are 30 States in the Nation which suffer from lead poisoning through moonshine whiskey; Washington, D. C., is one of them--I mean Washington.

MR. BARNES: I guess we have just been given statehood. (Laughter.)

MR. THOMAS: I suspect you mean Washington State instead of Washington, D. C.

DR. LOHSE: Well, when you get up to that place there are so many people, you know, you kind of feel like one.

O. K., the detrimental health effects of airborne lead have not been clincically established except by EPA's own in-house research. Now, here is my complaint.

The Department of Health, Education, and Welfare, the National Academy of Sciences, despite your reference here, which I feel is incorrect, two international conferences in the years of 1970 and 1972, one in Europe and one in Puerto Rico, and the preponderance, in my opinion, of the U. S. medical profession do not agree with EPA's own scientific findings. And as a matter of fact, the Health, Education, and Welfare has refused in two interagency meetings to endorse EPA'a allegations of airborne lead.

So I feel your references to it are improper and my complaint, you see, my complaint is that the ends do not justify the means. The fuzzy and inaccurate use of science--and good science is hard enough to come by--by the Administration and the Agency is something that we should avoid at all costs.

MR. THOMAS: Well, I notice when you speak of science you did refer to EPA's scientific studies.

DR. LOHSE: Yes, sir.

MR. THOMAS: Let me say, however, that one of the first things I would say is, first of all, go back to the statements made before, that our ignorance is great. O.K.?

The next item, say, that I would repeat that although lead-based paint is generally considered by many people, including HEW, to be the prime cause of lead poisoning and high blood lead levels in children in inner cities, EPA's feeling is, on the basis of some limited studies that we have made and on the basis of some other information which was available, part of which just came to my attention recently, which indicates that blood lead levels in inner city children increase during the summer months, which if the lead-based paint was the problem it would be linear across the entire year in all probability, not when they are outside playing in the street.

But I would also say that your lead-based--I mean your paint is suspected as being the major cause by one other factor and that is that it is not merely the lead in the air that is ingested, it is also the lead in the dustfall on the streets. EPA has conducted some studies which indicated some very dangerously high levels of lead in the dust along the streets where the inner city children play and these high lead levels were measured right along the high traffic arteries where the cars headed back out to the suburbs travel on their way to and from their work place in the city. And on the basis of this information, I for one believe that the EPA's findings were very scientific, as you said, and that they justify some skepticism as to the lead-based paint being the prime causative factor in the high blood lead levels.

MR. BARNES: Thank you very much, Carol. We really appreciate your being with us this afternoon and wish you a good flight back.

At this point, what I would like to do is give people 5 minutes to stand up and stretch. We do have a problem again with our next witness needing to catch an airplane, but I think we need to give the stenographer a chance to catch her breath and people a chance to stretch.

So 5 minutes, a quarter after 4 we are going to bang the gavel and dig in again.

(RECESS)

MR. BARNES: At this point we will reconvene.

The next representative that we will hear from is Mr. David B. Sebree, who is an attorney with the Environmental Control Section of E. I. duPont in Wilmington, and I think we are particularly fortunate in having Mr. Sebree here. He is on kind of a tight schedule working around the country on a number of environmentally related problems today and we really appreciate his taking the time to stop here in St. Louis and give the Board the benefit of the viewpoint from the industrial sector.

Mr. Sebree.

DAVID B. SEBREE, ATTORNEY
ENVIRONMENTAL CONTROL SECTION
GOVERNMENTAL AFFAIRS & TAX DIVISION
E.I. DU PONT DE NEMOURS AND COMPANY
WILMINGTON, DELAWARE

MR. SEBREE: Thank you, Mr. Chairman, members of the Board.

It is a pleasure to be here and participate in this exchange of views with you. When I was first asked to make a presentation to you I was somewhat at a loss as to why me. My company has no plants in the St. Louis area. We have one small paint plant at Moberly, Missouri.

It was suggested that I direct my comments toward the economic impact upon urban areas in general. After examining this subject from the industrial aspect, I have to conclude that the impact upon industry will be not a great deal different of whether our plants are located in an urban area or in a rural area.

As we interpret the laws and the regulations and the requirements which we face under both the water and air acts that the Federal Government has passed, our obligations will be fairly equal throughout the country. This is not to say that there will not be an impact different at times upon major urban areas, but simply that it will not be greatly different upon the industrial plants.

An examination of the format of panels on air and water environmental control usually reflects 3 specific groups as participants, namely, the government, both the State and Federal, industry, and organizations representing the interest of the public, such as the League of Women Voters, the Audubon Society, and various other environmental control groups, and I think this is appropriate because these are the three groups which are active regarding this important subject.

Unfortunately, there seems to develop many times from this format and from other confrontations an adversary attitude, at least in some cases. As a result, what I feel is the necessary spirit of cooperation is overshadowed by the desire of one or more representative groups to prevail. I would hope that my remarks do not necessarily express an industry point of view but, rather, a reflection on today's subject that will bring whatever help industry can offer through ideas and recommendations to you leaders.

With these remarks as background, I would like to examine a few facets of our environmental control efforts in relation to economics. There are 4 points which I wish to discuss:

One, the necessity of intermeshing our environmental goals with our other national goals.

Two, the interrelationship of water control programs with air pollution control programs and land use programs.

Three, the costs and cost increments involved in effluent control, both the air and the water. And

Four, the public.

Too often there is a tendency to separate the economics of this Nation's activities from our environment. We tend to ask questions such as how would environmental control measures affect our economy or how would the changes in industrial and commercial activities improve or damage the environment. To me our economic activities, both as individuals and as a national group, represent an integral part of our environment. They are not some separate force acting upon it.

If this observation has validity, then the question we must continually ask ourselves is not "How much will this environmental improvement cost?" but "Will this improvement, as it interrelates economically and socially within our lifestyle, contribute to the overall betterment of our society?"

Now, these are heavy words, and for that I apologize, but too often in our zeal to immediately improve things to the nth degree, we find ourselves with unwanted side effects, results which in the long run can be more detrimental to our lifestyle than the immediate problem which we have sought to solve.

Are our environmental goals intermeshing with other national objectives? I wonder. How many of us, either in industry or in government, thought to evaluate interrelationships between energy demand, fuel resources, and our low-sulfur fuel regulations prior to the present shortage? How many studies are now being made of the allocation of both our national and economic resources between such important programs as urban renewal and environmental improvement? Are there any evaluations being made of the impact upon fuel availability by the Mine Safety Act of 1970? How will the current proposals to dramatically restrict strip mining affect future fuel availability? My point is that our environmental improvement efforts affect other areas of our life just as certainly as those activities affect the environment.

As an aside, this morning a comment was made that electrical buses would be excellent for a solution to urban problems since they do not pollute. I have no argument with electric buses. I think that they would be an excellent thing. But if this type of program is developed in an urban economy--pardon me--in an urban area, I certainly think that we should be evaluating (a) the increased demand of electricity in an already perilous situation upon our energy demands, (b) the evaluation that that will have upon our fuel resources, and (c) the impact it will have upon other areas, for example, where they mine coal. It may well be in balancing these we should use electric buses, but it should be evaluated.

The Nation simply does not have enough money to reconstruct the whole environment overnight. If we had the money we cannot deliver all the needed equipment, and if we had the equipment we could not guarantee its use because of lack of trained personnel. Once again we face the age-old question of resource allocation, magnified now by the velocity of technological change, the growth in population, the increase in urbanization, and a mounting conviction that we must do something promptly about the environment. Some people have made a suggestion in which I find merit: it is that this Nation needs, and the public deserves, a straightforward priority list of tasks to be undertaken in environmental improvement, a list that shows what is to come first and what is to be deferred.

At the top of the list is the protection of human health, with immediate attention paid to those environmental offenses and to those geographic areas where health hazards now exist.

Second are the problem areas where health will be threatened soon unless corrective action is begun promptly and where natural resources vital to the future are in jeopardy.

Third come improvements which fall in the category of convenience or aesthetics. These latter improvements are not unimportant--we want a place to live that is pleasant and not merely tolerable--but these efforts should not be allowed to water down the attention paid to the critical problems of other areas just alluded to.

In the last analysis, the government, and particularly the Federal Government, must coordinate an overall job in establishing national policies and national priorities. Unless this is done, our environmental control program may suffer undue delay. It may also create unwanted waste and needlessly increased economic burden.

My second point deals with the interrelationship with water control programs. As the total environmental effort is but one part of our national activities, the various waste control programs must also interrelate if you are to minimize economic impact. You cannot solve water pollution control problems in a satisfactory manner unless you give some consideration to air pollution control programs, solid waste disposal, and land use management.

For each of the other types of control programs, the same proposition holds true. In the past and, to a degree, even now, there is a tendency to separate our environmental control programs into separate categories. For example, many States have water pollution control programs which are entirely separate from their air pollution control programs. In many instances, both are separate from planning and zoning and solid waste control.

Many times local government operates air control offices whose objectives do not mesh with the State program. At the same time, seldom do these local governments concern themselves with water pollution control at all except in the operation of their sewage disposal facilities.

At the Federal level, this problem has at least been recognized and efforts to eliminate it have resulted in the creation of EPA and NEPA. Over the last 3 years we have seen a major move toward coordination, the lack of which in the past, in my judgment, has definitely slowed our efforts toward improved waste control practices. However, even here there is a great deal of room for improvement.

Lest you think I am critical of government, let me say that in industry we, too, are struggling to do away with the fragment approach. Too often we have tried to treat air and water and solid waste problems as separate entities without stopping to notice that the solution to one kind of problem often aggravates another.

The problem, in part, is that all of us in the professions have been programmed to specific disciplines; the line of least resistance is to stick to that which we know best. This may be the logical way to attack familiar problems in science or law, but the problems of the environment come in a different kind of package. In a recent book, Paul Shepherd points out that ecology "...is not a discipline in the usual sense of the word." As he says, "There is no body of thought and technique which frames an ecology of man. Ecological thinking...requires a kind of vision across boundaries."

In its effort to overcome this problem, industry is developing an interdisciplinary approach. We are drawing together in task force chemists, engineers, toxicologists, lawyers, managers, and other people with many types of competence on a project basis to get the most for our money out of a plant. It is our hope that in the future we will be able to build plants and carry out our commercial activities under the most economical system possible but also with the least environmental impact.

To return to my theme, if these various disciplines are not carefully interrelated, the ultimate result is one of waste, waste that in some form or fashion will be passed on to each of us as individuals and, as indicated previously, which will deprive some other high-priority task from adequate funding.

My third point relates to the expenditures we anticipate both in the near and not-so-near future. Approximately one year ago, the United States Department of Commerce's National Industrial Pollution Control Council presented cost figures that estimated that this country would spend approximately $105 billion in environmental cleanup efforts by 1975. In that report, Burt S. Cross, Chairman, stated that industry spent between 4 and 5 billions during 1971 alone for its own pollution control facilities, and that figure did not include funds devoted to the development and marketing of pollution-control products and services and the money expended to run the new activities. In addition to the $105 billion, the report stated that hidden costs must be included in the total invoice; that is, plants that had to close because they could not profitably meet the environmental control requirements, low profit margins that in turn reduce sales and cause cutbacks in employment, higher prices, and production slowdowns caused by construction delays.

At this point, let me emphasize that in presenting these extremely high cost estimates and in commenting upon possible unwanted effects, I am not recommending a more lenient control program. My purpose is to reemphasize what many, many others are saying; that is, that the overall cost of environmental improvement protection is going to be high no matter what degree of limitations on effluents we place upon ourselves.

Accepting this fact, let us order the program to achieve our goal, but let us also minimize waste and avoid unwanted economic impact while doing so. My concern, too, is that the public does not readily comprehend what that cost will be and what portion of the burden it will bear. At the same time that this cost report was issued last year, the National Wildlife Federation, through the Gallup Poll, had sponsored a questionnaire on environmental improvement costs. The results of that poll showed that 90 percent of the public had no appreciable idea of the cost involved in environmental control and that two-thirds of the public did not consider itself to be a part of the pollution problem. Less than half of the people questioned stated that they were willing to pay a part of the bill for cleaning up the environment.

Since this cost report was issued by the United States Department of Commerce, Congress has passed new legal requirements for the cleanup of our Nation's streams. EPA has developed its administrative programs under both the air and water acts to carry out the dictates of Congress. Essentially, these programs call for the installation of the best practicable technology for the control of pollution by 1975 or 1977 at the latest. For new plants, they call for the best processes available, followed by the best available technology for the control of emissions. This year, Congress is evaluating comprehensive control legislation for solid waste disposal. Under this proposal, control measures every bit as stringent as those being developed for water and air pollution will come into being. Last but not least, there are

Congressional proposals for land use which will impact upon the economy.

It, therefore, follows that the estimates which I have just set forth are already old hat. If the $105 billion national figure, of which $30 billion will be spent just for pollution control facilities at existing industrial plants, is in any way nearly accurate, then it is fair to assume that the additional requirements after 1975 will go far beyond this figure. I say this for the reason that pollution control costs appear to be in an approximate inverse ratio to the effluent reductions, whether they be to the air or to the water. As just one example, let me say that when you begin your controls on a power stack, at least for one of our type of operations, for approximately $1 million you can effect 85 to 87 percent reduction. To reduce this up to 95 percent will cost you another million or million and a half. To go from there to 97 or 98 percent will double that amount again. The closer you approach the zero figure the more astronomical become the costs of your control.

With all this in mind, I wish to make one last point and then run for my airplane.

In an economy such as ours we have an obligation to give the public the most for its money. Whether it be government, industry, or environmental protection groups our thinking must direct itself toward giving the people a clean environment but a clean environment at the lowest possible cost. And since even the lowest costs will be high, the public must be educated to the economic contributions which each of its members must make.

Thank you.

MR. BARNES: Thank you very much, Mr. Sebree.

Did anybody have a quick question? I know we probably wouldn't have time for more than about one or two.

Dr. Donaldson.

DR. DONALDSON: I can ask a quick question. I don't know whether I can get a quick answer.

MR. SEBREE: Not from me. (Laughter.)

DR. DONALDSON: I just wondered if you thought about this problem enough, you personally, having made a presentation to us, what you think the Nation should spend per year totally to achieve--what is your opinion--to achieve an environmental goal?

MR. SEBREE: No, sir, I can give you a quick answer, I have not thought about it in specific dollars. I have thought about it as a philosophical thing and that is that in a country that has an affluent society like we have it seems to me that we can have a dramatic cleanup and enjoy parts of our country that have been degraded in the past at a fair, comparatively speaking, low cost.

If I take exception with anything, the education that my technical people have given me, it's for unrealistic goals where they begin talking about zero emissions. The cost to even approximate zero is pushing into astronomical figures and I wonder if you are going to get a net benefit in striving for those numbers. As I see it, in trying to get zero at one place you are going to impact somewhere else upon our national environment.

MR. BARNES: Mr. Kimball, you have one question. We will make it the last one.

MR. KIMBALL: Yes, Mr. Sebree, could I correct the impression you left on page 10 of your paper quoting the National Wildlife Federation--

MR. SEBREE: I was afraid--

MR. KIMBALL: --Gallup survey. I happen to represent that organization--

MR. SEBREE: Yes, sir.

MR. KIMBALL: --and commissioned the Gallup poll people to do that study.

D. B. Sebree

You stated here that only half of the people questioned or less than half stated they were willing to pay a part of the bill for cleanup and that is true. It was, as I recall, somewhere between 40 and 50 percent. But what you neglected to say was that about the other half were willing to live more simply to achieve environmental goals. And when Gallup analyzed the economic levels of the people surveyed, they found that the people who were willing to pay were the people that had the money to pay and the people who were willing to live more simply were those in the lower economic strata of our society who probably had only sufficient money to meet their basic needs, but in spite of that were willing to live more simply in order to achieve the goal. And the survey went on to conclude that fully 86 percent of our Nation's people, regardless of their economic level, were deeply concerned about a deteriorating environment.

Now, what is unfortunate and what I would hope industry would join with government and organizations, conservation organizations, in convincing two-thirds of our people who feel that they are not part of the pollution problem that they really are and that is the tragic difficulty, and unless and until, and I hope you agree with this statement, that we get everyone in this country on the same frequency that they are a part of the problem, that we are not going to be able to solve it.

MR. SEBREE: I couldn't agree with you more, sir.

MR. BARNES: Thank you very much for being with us this afternoon. I think your statement will be most helpful.

MR. SEBREE: Thank you.

MR. BARNES: And the final speaker on the program this afternoon is a man who has made a great contribution to the Board's meeting here in St. Louis over the past couple of days and I think has become a good friend of a number of members on the Board. He is Mr. Charles Copley, the Commissioner of Air Pollution Control for the city of St. Louis, and a man who was our guide on a tour of a number of the major industrial installations in the city yesterday as well as our guide for one of the modern air monitoring stations here in the city.

Mr. Copley.

CHARLES M. COPLEY, JR.
COMMISSIONER OF AIR POLLUTION CONTROL
ST. LOUIS, MISSOURI

MR. COPLEY: Thank you, Mr. Barnes.

Gentlemen, I will try to make this short because it is getting pretty late in the day. I am sure you are all tired of hearing so much talk for so long a time.

I have been the air pollution officer of the city for the last 9 years, but I have been associated with pollution control one way or another and health department activities for about 25 years, and before that I had a little experience on the other end of the stick, making pollution in industry as a chemical engineer.

We are, of course, one of the cities who has been in this business for a long time and I get a little frustrated sometimes with the people who think we can wave a magic wand and abolish pollution overnight. I have got a little thing I call to their attention on the wall of my office when they visit me. It is a little certificate in membership in the Citizens' Smoke Abatement League. A prominent merchant here in St. Louis issued it. What is interesting about it is that the date in the lower left-hand corner is June 1, 1893. That is 80 years ago. So air pollution isn't something new. There have been a lot of things done and there is still a lot more to do, of course.

We were, as I said, one of the pioneering people in this thing, particularly in the smoke field. It started off voluntarily way back in those days. Nothing much got done. People improved for a while and then it got worse again. In the very late thirties and early forties we had a very pioneering smoke program that our man who later became our mayor became very famous for. I handled that problem. Then along came World War II and our newer problems of the day, industrial pollution and the automobile cropped up.

We were fortunate here back in the middle sixties, we underwent a large and very involved interstate air pollution study with the help of the Federal people. It was a Division of Air Pollution Control in those days and the Public Health Service. And this very thoroughly evaluated the problem. We came up with recommended standards and the kind of legislation it would take to clean up the air to meet these air quality standards. When I say standards, it was both emission and air quality standards.

And we got a program adopted and started in 1967. That is about 3-1/2 years before the Clean Air Act. It was basically a strict control ordinance, featured a minimum of due process, very direct impact, and had authority of the control agency.

It might interest you to know that the two fundamental standards that action was based on were a particulate air quality standard and an SO_2 standard which both later became the Federal standards. In fact, our SO_2 standard is what is now today the secondary SO_2 standard of EPA and our particulate is what is the primary standard, the 75 micrograms.

So you see, we didn't have to do much to redesign a program in order to meet the standards. We already had one that was shooting for the same standards.

I might say also that although there was a great deal of complaining at the time we were making these proposals and holding public hearings and aldermanic hearings and things of this type by people who thought they would cost too much and were too difficult or too stringent, that once it became the law, in spite of these objections, we got very good cooperation and it has been that way ever since and I think we got perhaps compliance with minimum problems as compared with some other people. We haven't spent too many hours in court. Only one really major suit with the coal industry over the SO_2 requirements.

The Federal Government helped us, of course, in all this, with the support of that original study, and then after that with the grants we have been able to have to develop all the programs. What has frustrated us perhaps more than anything else about the 1970 Clean Air Act is it required so much red tape and writing implementation plans and preparing reports and tabulating a lot of data to submit by certain deadlines in order to supply the requirements. We get a little frustrated sometimes about some of the legal nitpicking that we think EPA and particularly its lawyers do. We have a case now where they say we don't have authority that we have been exercising for the last 15 years. Maybe we don't have it, but nobody stopped us from using it.

As to our air quality now, Mr. Shell maybe talked about that a little, but we are just about at the secondary standard for SO_2 emission. Our particulate we are at 86 micrograms last year and, of course, the primary standard by 1975 is 75 micrograms and we have little doubt that we will be able to reach that. In fact, I think actually our figure last year was somewhat less than that but we had one station that was spotted right next to an interstate highway being built that had some phenomenally high readings over quite a period of time.

We are also fortunate in the automotive pollutant field in that our situation is such that we don't have to get into transportation controls, that if the EPA standards for new vehicles do the job they are supposed to do we will meet the pollution standards for oxidant and for hydrocarbons.

On the oxides and nitrogen I think it was expressed very well by somebody else, who knows. There we have the fallacy of the standards being adopted and a lot of red tape being gone through for implementation and standards and it was finally determined that the measurement method was no good and I understand this has been reevaluated and we will soon have some good procedures to go on that are endorsed by EPA as being valid.

Talking about the economic impact a little bit, which is what you are concerned about, there has been a lot of complaining and crepe hanging in the past, as I said, when the control regulations were adopted, there were statements made that people would be driven out of business and put under terrible burdens, and so on, and this just hasn't happened. I only know of one business in St. Louis that went out of business. That was a small foundry with old and tired management that just didn't want to bother. Subsequently a new management bought the concern and went back into operation and got on the road to compliance with the air pollution requirements.

There have been a few cases where archaic operations that were about to close anyway for economic reasons may have been hurried up a little bit. In one large packinghouse this was the case. I think in some chemical operations where there were more efficient operations at other plants, newer plants outside the area, the old ones here were phased out and the production increased at the newer operation. But this is a normal thing, because to control an old process is frequently extremely expensive and not worth it. It is better to spend your money on a new one.

Up to now very little of this impact has been felt by the individual citizen. He has read a lot about it in the papers. Maybe he has noticed his electric bill has gone up a little bit. He can't burn trash any more, this has bothered him, and particularly can't burn leaves, and this has really disturbed a lot of people that I think after several years of it now they have gotten used to going without the smell of burning leaves.

There has been a little further trouble because his car doesn't start too well any more if he has got a new one and his gas mileage isn't too good, but I think this may be self-correcting and it will encourage people to get smaller cars, at least the gas mileage part of it, and this will help solve the problem, if we had littler cars and they didn't need so much gas that is becoming ever more expensive.

But I think in the future we are going to have the really big impacts on individuals and then we will find out whether they really agree with all of this or if their heart is really in it. When it starts to really hurt their pocketbook when they buy a new car or if there are major changes in the costs of the things they have to buy like power, for one thing.

One of the things that concerns me, I think, as a technical person is the fact that in the Clean Air Act I have seen so much of the political arm of government and the experts that work with them, who are not necessarily always technical experts, taking the attitude it is always possible to lay down a deadline of some sort and reach it regardless of technology, that somehow or another American technology is so good that it will rise to the cause and find a way to make this deadline be reached. I don't think that is always the case. We are running into cases where this probably won't happen.

There can be cases where even if it does happen the economic impact will be so great and it would be much less if we would take a little more time to do a little research and more development to find out what really is the best way to control the program or problem.

There are some industries, too, where our control technology is very primitive yet. To think of one, we have a good example over here in the coke plant. This is the way we have made coke, I guess, for the last 75 years, and these operations, there are many of them all over the country and they are a vital part of the iron and steel industry without which our society couldn't operate. But the technology of control emissions from them is in its very early stages. We fortunately have a small one here that has done a good bit of work on it and has some very interesting and what I like to think is exciting new methods of control that may be well applied by some of the others.

Passing on a little bit to social impact, I would like to say that I think very little is known, although I heard a lot of statements made here today and I saw some of the briefing document, I think we are drawing pretty long conclusions from awfully short amounts of data. For years as air pollution people we have been saying that pollution travels everywhere, according to the way the wind blows and the meteorology diffuses it. It was a fundamental part of the Clean Air Act that political boundaries weren't recognized by air pollution control, that we had to do things on an air shed type of basis for that reason. If you have read that this is the case, then I'm sure that same air pollution that can't recognize where the ghetto starts and stops or where the poor people as compared to the more affluent people live, so until the data shows otherwise I think that the primary influences are still geographical and meteorological and perhaps we will get some better insights into this with this program such as the CHESS program which you have heard about and I think we should await some better information before we start jumping to too long conclusions on such short data.

Another one of the things that bothers me sometimes is the activists in our society who seem to think that we ought to change the whole social order to their concept of what is a better society. I don't think this should be done except for good reasons and not just to meet philosophical concepts held by a few but not by the general public. I think most people want air pollution to be controlled, but I don't think they want their whole way of live severely upset or changed around in order to accomplish it. I think they want their cake and they want to eat it too. I think the economically deprived people in our society, they want the advantages that our middle class now has, and the middle class wants to keep what it has got. The economically deprived people want the air conditioners, they want the goods and appliances, and so on, that they can't get. They want the jobs. And in order to get all these things so everybody has a better life we are going to have more manufacturing, more power uses, and more activities that provide the taxes, the services and the jobs, and I think the people in general and the leaders of people who in our political society are responsible to them will tend to fight things that might tend to stifle that kind of economic development and provide this better way of life.

Putting that together with the needs for environmental control then leaves you only one thing, that technology has got to meet the problem. We have got to develop to enable us to have the good life without the environmental degradation.

As a local agency, of course, here in St. Louis we are responsible both to the State and the Federal

Government. We firmly support the policy, I think, that President Nixon has expressed numerous times and very recently that State and local programs out there on the front firing line are the ones who have to do a major portion of the job and we honestly believe we are in the best place to do it, right here where we are closest to the problems. We believe the Federal Government's role should have more emphasis on providing assistance to State and local people, both the technical and financial type, and maybe a little less than what we seem to see lately trying to second guess what we have done or how effective it was.

One of the needs I see besides additional research is the fact that we seem to not get into the large scale demonstration type of thing. As an example, look at the powerplant in the SO_2 control situation. We have been monkeying with SO_2 controls for years. It is only in the last few months that the first catalytic oxidation unit has started up in a plant here in Illinois Power. The first actual trial of a dolomite scrubber was done by the Union Electric Company here at the same plant you saw yesterday. That didn't work out and it is now shut down, but I think eventually it will be a viable process. Both of these were on units in the range of 100 to 125 megawatts, but who is building 120 to 125 megawatts today? Nobody. Everybody is building from 300 to 500 to 700 megawatts.

If we are going to cure the powerplant control problem on SO_2 we have got to somehow demonstrate it on the size of plants that really count and I think that no private businesses probably in their right minds can spend the kind of money that this type of experimentation will take without an awful lot of help from the Federal Government, yet it isn't coming about. I think we frittered away too much on little things sometimes and maybe not put enough eggs in one basket to really get the job done.

Another pound wise and penny foolish--or maybe the other way around--situation that has confronted us recently and disturbed us very greatly has to do with control air pollution episodes. We were one of the first major cities to have a detailed plan for this in an operation since about 1967 when we adopted our law very shortly after that. We had a number of episodes, none of which got very serious, and the frequency and the intensity of them has decreased over the last few years because of the decreasing emissions brought about by the regular day-to-day control program.

That doesn't mean to say, though, that an episode couldn't occur. We have to remember that Donora, Pennsylvania, went for many years before it finally had its big one in 1948 and it hasn't had another one since. St. Louis has never had one that is of that serious nature, but we could have a pretty serious one possibly occur if the right combination of circumstances came along.

A vital part of controlling this is the meteorological input you have, and for that we have had these environmental meteorological support units run by the National Weather Service in some cities, one of which is in St. Louis, that do something twice a day and have a meteorologist who becomes an expert on pollution problems and advising us and helping us when these episodes occur and actually ringing the bell when they are starting and warning us in advance. Now we suddenly find out that the money for this has been drastically cut and in St. Louis this unit is due to be phased out in the next 30 days.

It can have two effects. Of course not calling an alert when it ought to be called could be disastrous. On the other side of the game, calling one unnecessarily because of poor input meteorologically, which we will lack if we have this kind of unit, can be extremely expensive economically. This involves operating all the agencies around the clock, it involves all kinds of industrial preparation that is expensive to reduce emissions on an emergency basis. Just for the agency alone, our last alert, which lasted something like 2-1/2 days, cost me $3,000 in staff overtime and I have no idea what it probably cost the industry in time when they were all alerted by us to be ready to take emergency action.

So I think this is a very foolish way to save money, frankly. I think instead of cutting these programs out, there are probably places around we ought to be providing them that don't have them now.

You did hear a lot, I guess, earlier in these talks about the RAPS study, and this is a very vital thing to do this kind of study. It is a difficult undertaking. By the way, this lack of continuity in data, losing this meteorological support unit is not good for RAPS, either. Although they will pick up some of this data, there will be a year and a half gap before they start doing it.

But this is the sort of study we need to give us better insight into such problems in the future and such things as weather modifications that may be caused by pollution that we know very little about, some of the computer modeling. However, computer modeling is not the answer entirely. It is the second best to measuring it.

You still have to measure what you are doing and measurements should not be neglected in order to spend all our money on research. Fortunately we are in pretty good shape there with our somewhat sophisticated monitoring system that you saw.

Another very important work I think EPA is doing is the one of developing new source performance standards. This is the thing that really puts time on our side because as new processes develop or meet these standards and the old ones grow old and are phased out we are guaranteed more or less of the best technology being applied to it by the new source performance standards.

Another very important one in my view, that was just discussed briefly by a previous speaker, was this business of controlling land use. We have done most of our decisions in the past in the development use of our land on an economic basis and this wasn't always the right decision when it came to air pollution control. It isn't the right decision, for instance, to cite a powerplant solely on how much money it is going to cost to buy the land that it is built on.

I think we could avoid some of the problems we have today like in downtown St. Louis. As an example, one of our large industrial areas with control problems is southeast of the city and that is the direction the low velocity winds come under stable atmospheric condition when you have a pollution problem. We would be a lot better off if the thing were northwest of us than we are with it southeast. So if we use land use planning properly the RAPS study will give some input to this too and we ought to be able to guide development over the next 25 years or maybe 50 years so as to minimize the future problems that we face.

I think that about covers what I generally wanted to say to you and I certainly appreciate the opportunity. Thank you.

MR. BARNES: Thank you very much for the statement.

Do the members of the Board have any questions at this point?

MR. KIMBALL: I just have one.

MR. BARNES: O. K., Mr. Kimball.

MR. KIMBALL: I question you again about the Federal role and its relation with the local air pollution authority. You mentioned you would like to help in research and monitoring, you wanted less second guessing, but you neglected to mention the backup enforcement under the law and under the Federal law. Do you value that or do you think you can get along without it?

MR. COPLEY: I don't really think we need it. We haven't needed it up until now and I don't foresee it likely that we will need it in the future for our local problems.

Now, there are some bigger problems, things like the powerplant siting, things of this type, where it is essential that we get large inputs in beyond what we can say is the local agency or the State itself can say is the State agency.

MR. KIMBALL: If that were the case, how did we get in the situation we find ourselves nationally on air pollution if the local and State agencies were doing that well of a job?

MR. COPLEY: Oh, I didn't mean to imply they were. I think there has been a tremendous development of local and State agencies since the early clean air acts came along. It wasn't the 1970 act that triggered it, it was earlier acts where money started to be available and plowing that money in the form of development grants for programs and eventually maintenance after decent programs had been evolved was essentially doing it. Most of that, I guess the big impetus started with the 1965 act. The 1967 act sort of carried along with it.

The 1970 act was the one that really turned things around a little bit and established Federal standards where before the States had the burden of developing the standards. And I don't disagree with that part of the Clean Air Act of 1970 that the standards should be Federal. I think it was a mistake in the 1967 act that that wasn't included there.

MR. KIMBALL: But you don't see much advantage in the Federal enforcement backup?

MR. COPLEY: I don't think we really need it in the St. Louis area. There may be areas where you do need it. I think authority needs to be there. I think where you exercise it is a judgment the Administrator is going to have to make. I think he has to make it looking at the programs and what they have accomplished and not again on legal nitpicking, which some of the lawyers tend to do sometimes.

MR. BARNES: Mr. Kovago.

MR. KOVAGO: First I would like to express my warmest thanks to Mr. Copley, his colleagues, the city and the State environmental authorities for the wonderful work which they did.

And I really very much enjoyed your philosophy which came out from your presentation, which is a balanced philosophy, and I myself also feel that we would need a balanced philosophy if we want to be successful on this very difficult and very sensitive field.

So after this I would like to ask two or three very brief questions.

The first is when you people here started your work, what was your philosophy? Did you shoot for source control or ambient control?

MR. COPLEY: Well, I don't know any way you can control ambient. Ambient again is subject to meteorology, dispersion and geography. The only way you can accomplish a better ambient is to control the sources.

So we went for source control with not too much emphasis on the air quality standards end of it, but the major emphasis on emission limitations on the actual sources.

MR.KIMBALL: Yes, thank you. I believed that was the case. And I intend to come to the meaning of ambient standards and I would like to ask the question, would you please tell me:

Do you feel that ordinary people can make a difference or a differentiation between the meaning of source control and ambient standards?

MR. COPLEY: It gets very confusing for a great many people because we talk about air quality standards and we talk about emission standards. I like to use the word, although I don't always do it, emission limitations, just to make that distinction, which I wish we would use a different word for air quality standards and for the emission control limitations than we have and I think it would be less confusing to a lot of people.

MR. KIMBALL: Thank you very much. Again I feel the same way, that unfortunately people usually don't understand that the primary and secondary ambient standards really represent an ultimate goal which may or may not be reached in a short time, as it is illustrated by the Los Angeles case and other cases in the large metropolitan areas. So I wondered if that a very stringent non-moving non-variable ambient standard is really the ultimate wisdom or there should be some cases where Congress should take a second look whether the ambient standards could be implemented in a certain area.

With this note I refer to your statement that several people believe that air pollution and its control as a way of changing the social order is the real concept. Now, I myself feel that the ambient air quality standards by themselves utlimately, if you take a broad look, will require major changes in our social order.

MR. BARNES: Professor Holden?

PROF. HOLDEN: Mr. Chairman, I have only one brief question.

Mr. Copley was very specific about some disagreement he has with the briefing document and I just wonder if for our future thinking, so that we know exactly what we are comparing, could he be more specific about the particular points that he thinks are important where the document is in his judgment either erroneous or goes too far on the basis of the data? I think if he would refer to pages.

MR. COPLEY: No, I can't refer to exact pages. But the thing I was disagreeing with, and also with the previous speaker from the EPA, is that you can make a decision at this stage of the game that just because an area is economically disadvantaged or is a ghetto that it has got a more serious pollution problem than an area that is better economically advantaged. I know cases here where this is not the case.

It appears to me to have, as far as we can see here, little relationship. I think we could be wrong. I think what we need to do is wait for things like the CHESS study to give us firm data so we really know what we--

PROF. HOLDEN: The only reason I am asking is that there are at early pages very specific presentations of data--I am not quite clear whether the data are well done or not or whether they are properly interpreted or not--very specific interpretations of data and similarly it is either the 1971 or 1972 CEQ report has a full chapter that involves very specific presentations of data. And do I take it that you simply disagree with that approach methodologically, you think you cannot do it that way?

MR. COPLEY: No.

PROF. HOLDEN: Or do you think that their samples are unrepresentative or that St. Louis is a unique case? What is your point of view?

MR. COPLEY: I think the way to do it is the way the CHESS study is doing it where you do the data specifically in a controlled and detailed way to make a scientific determination rather than to try to extrapolate a lot of information from data that wasn't collected for that specific purpose.

PROF. HOLDEN: So just for our guidance so I understand fully your position, you would set aside the use of epidemiological data as it is done in the briefing paper, as it is done in the CEQ report, and so forth.

MR. COPLEY: And you stated more formally like the CHESS study, that is what I think we need.

PROF. HOLDEN: Thank you. I understand your position.

MR. BARNES: Well, Mr. Copley, I thank you very much for being with us. I think you have added a great deal to the stay of the Board in St. Louis and we are most appreciative of your hospitality and assistance.

At this point I would have just one statement to make to those of you in the audience that have been with us today. If there are any of you that have any reactions or statements that you would like to submit for the record for the Board's consideration, we would be pleased to have them or any additional data, and so on, that you have. If it is possible to have that tomorrow morning, I think that would aid in the Board's deliberations, but cases where that is not possible and you would like to bring some things to our attention we would be pleased to have you do that if you could get them to us, say, within the next week.

And with that, we will draw to a conclusion the public hearing portion of the President's Air Quality Board. And I would ask the Board members to stay just a few minutes afterwards so we can set our ground rules for tomorrow.

At this point we are finished. Thank you.

(Whereupon, at 5:15 p.m., the hearing was adjourned.)

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REPORTER'S CERTIFICATE

I, Virginia H. Rankin, a Certified Shorthand Reporter, do hereby certify that the proceedings had in the matter set forth in the caption page hereof were reported in shorthand by me, afterwards transcribed, and that the foregoing pages numbered 1 to 281, inclusive, contain a true and complete transcript of said shorthand notes.

Virginia H. Rankin, CSR
Certified Shorthand Reporter